



**US Army Corps
of Engineers**
Construction Engineering
Research Laboratory



The Environmental Compliance Assessment and Management Program (ECAMP) Supplement for The Environmental Assessment and Management (TEAM) Guide

Revised September 1999

The numbers of environmental laws and regulations have continued to grow in the United States, making compliance with these regulations increasingly difficult. Environmental assessments became a way to determine operational consistency and compliance with current environmental regulations.

Beginning in 1984, the U.S. Army Construction Engineering Research Laboratory (USACERL), in cooperation with the U.S. Air Force, began the research that led to the publication of the Environmental Compliance Assessment and Management Program (ECAMP). In Fiscal Year 1994, the U.S. Air Force became a participant in the efforts to create a single compliance assessment manual for use by all members of DOD. The resultant manual is The Environmental Assessment and Management (TEAM) Guide. To examine Air Force Instructions, Air Force Manuals, and Air Force Policies, the ECAMP supplement was developed to use in conjunction with the TEAM Guide.

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Air Force Supplement

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FOREWORD

This is USACERL Special Report 97/60. **The report is based on information available in Air Force Instructions (AFI), DOD Instructions (DODI), and DOD Directives (DODD) as of 1 July 1999.** This work was performed for the U.S. Air Force (USAF), Director of Engineering and Services, Environmental Division, under Military Interdepartmental Purchase Request (MIPR) number FQ76249909018. The USAF technical monitor was Scott Newquist, AFCEE-EQP.

The research was performed by the Installation Division (CN), Environment and Support Processes Branch (CN-E) of the U.S. Army Construction Engineering Research Laboratory (USACERL). The Principal Investigator was Donna J. Schell (CN-E). Jerry Benson is Acting Branch Chief (CN-E) and John Bandy is Division Chief (CN).

COL James A. Walter is Commander of USACERL, and Dr. Michael J. O'Connor is Director, USACERL.

NOTICE

This supplement is intended as general guidance for personnel at U.S. Air Force facilities. It is not, nor is it intended to be, a complete treatise on environmental laws and regulations. Neither the U.S. Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information contained herein. For any specific questions about, or interpretations of, the legal references herein, consult appropriate counsel.

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Summary of Changes Since September 1998	
Checklist item/Section	Action Taken
Main Introduction	
Glossary of Air Force Acronyms	Revised January 1999
Air Emissions Management	
AE.135.1	Changed topic heading number from AE.115 to correctly read AE.135.
Cultural Resources Management	
Main Introduction	G. Additional Records To Review Revised October 1998
CR.1.8 through CR.1.11	Moved April 1999
CR.4.1. through CR.4.4	Moved to CR.1 April 1999
Hazardous Materials Management	
Main Introduction	B. Department of Defense (DOD) Directives and Instructions. <ul style="list-style-type: none"> DODD 6050.8 description deleted July 1999.
HM.1.1	Revised July 1999
HM.1.6	Revised July 1999
Hazardous Waste Management	
Main Introduction	G. Additional Records To Review Revised October 1998
Natural Resources Management	
NR.1.1	Revised April 1999
NR.1.3	Revised October 1998
NR.1.8	Citation Revised April 1999
NR.1.14	Citation Revised April 1999
NR.1.17	Citation Revised April 1999
NR.10.3	Citation Revised April 1999
Other Environmental Issues	
Main Introduction	A. U.S. Air Force Instructions (AFIs) and Policies <ul style="list-style-type: none"> AFI 32-7063 description revised January 1999 B. Department of Defense (DOD) Directives and Instructions. <ul style="list-style-type: none"> DODD 4210.15 description deleted July 1999
O2.2.1	Revised January 1999
O4.1.1	Revised July 1999
O4.9.1 through O4.9.13	Moved April 1999

Summary of Changes Since September 1998		
O4.10.1. O4.10.13	through	Moved to O4.9 April 1999
O4.11.1 O4.11.6	through	Moved April 1999
O4.15.1 O4.15.6	through	Moved to O4.11 April 1999
O5.1.1		Revised April 1999
O5.20.2		Added April 1999
Appendix 6-7		Added April 1999
Pesticides Management		
Main Introduction	A. U.S. Air Force Instructions (AFIs) and Policies <ul style="list-style-type: none"> • AFI 32-1053 description revised April 1999 B. Department of Defense (DOD) Directives and Instructions <ul style="list-style-type: none"> • Description of DOD Military Handbook 1028/8A, Revised April 1999 • Description of DOD Regulation (DODR) 4145.19, Deleted April 1999 E. Key Air Force Compliance Definitions <ul style="list-style-type: none"> • Definitions for <i>Integrated Pest Management</i> and <i>Pests</i>, Revised April 1999 • Definition for <i>Vector</i>, Deleted April 1999 	
PM.1.1 PM.1.5	through	Revised April 1999
PM.5.1.		Revised April 1999
PM.5.2		Citation Revised April 1999
PM.5.3 PM.5.5	through	Revised April 1999
PM.10.1 PM.10.3	through	Revised April 1999
PM.10.4 and PM.10.5		Citation Revised April 1999
PM.45.1		Citation Revised April 1999
PM.45.2 and PM.45.3		Revised April 1999
PM.45.4 PM.45.21	through	Citation Revised April 1999
PM.55.1		Revised April 1999
PM.55.2		Deleted April 1999
Solid Waste Management		
Main Introduction	B. Department of Defense (DOD) Directives and Instructions. <ul style="list-style-type: none"> • DODD 4165.60 description deleted July 1999. • DODI 4715.4 description revised July 1999. 	
SO.1.5 and SO.1.6		Moved April 1999
SO.4.1 and SO.4.2		Moved to SO.1 April 1999
Toxic Substances Management		
T2.1.7 through T2.1.9		Moved April 1999
T2.4.1 through T2.4.3		Moved to T2.1 April 1999
T4.1.3 and T4.1.4		Moved to T4.20 April 1999
T4.1.6		Moved to T4.15 April 1999
T4.1.8 T4.1.12	through	Moved April 1999

Summary of Changes Since September 1998	
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T4.10.2	Moved April 1999
T4.15.1	Moved April 1999
T4.20.1 through T4.20.4	Moved April 1999
Wastewater Management	
Main Introduction	B. Department of Defense (DOD) Directives and Instructions <ul style="list-style-type: none"> • DODI 4120.14 and Office of Management and Budget (OMB) Circular A-106 description deleted July 1999.
WA.1.5 through WA.1.8	Moved April 1999
WA.4.1. through WA.4.4	Moved to WA.1 April 1999
Water Quality Management	
Main Introduction	B. Department of Defense (DOD) Directives and Instructions <ul style="list-style-type: none"> • DODD 6230.1 description deleted July 1999.
WQ.1.4 through WQ.1.20	Moved April 1999
WQ.4.1 through WQ.4.17	Moved to WQ.1 April 1999

AIR FORCE SUPPLEMENT

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SUPPLEMENT OBJECTIVES AND ORGANIZATION

This supplement provides the Environmental Compliance Assessment and Management Program (ECAMP) assessment supplement checklists to be used with The Environmental Assessment and Management (TEAM) Guide during an ECAMP assessment. These environmental assessment checklists are based on Air Force and Department of Defense (DOD) requirements.

This supplement is divided into 13 sections. General ECAMP guidance and information applicable to all 13 compliance assessment checklists in the ECAMP can be found in the Main Introduction. Sections 1 through 13 contain the specific environmental compliance guidelines and checklists for each of the 13 compliance categories:

- Air Emissions Management
- Cultural Resources Management
- Hazardous Materials Management
- Hazardous Waste Management
- Natural Resources Management
- Other Environmental Issues
- Pesticide Management
- Petroleum, Oil, and Lubricant (POL) Management
- Solid Waste Management
- Storage Tank Management
- Toxic Substances Management
- Wastewater Management
- Water Quality Management.

This supplement contains references to Air Force Instructions (AFIs), Air Force Manuals (AFMs), and Air Force Pamphlets (AFPs). HQ USAF/ILEV will issue interim guidance as the new policies and regulations are approved.

PROGRAM BACKGROUND

[Revised June 1998]

ECAMP is explained in AFI 32-7045, *Environmental Compliance Assessment and Management Program (ECAMP)*, dated 1 July 1998. ECAMP is one of the processes to help commanders assess the status of their environmental management system and to identify and track solutions to environmental problems. The primary objectives of ECAMP are:

1. improve Air Force environmental management worldwide to meet compliance standards
2. build supporting financial programs and budgets for funding environmental compliance requirements.

The secondary objectives of ECAMP are to:

1. eliminate underlying environmental problems through root cause analysis
2. identify systemic environmental problems
3. forecast future compliance requirements
4. evaluate the effectiveness of internal environmental management programs through Environmental Management Self-Assessment
5. accommodate the common interested in assessing environment, safety, and occupational health programs.

All major and minor installations (including tenant organizations on and off the installation), support sites with one or more permits from environmental regulatory agencies, and GOCO facilities are included in the ECAMP program. Major installations will conduct internal compliance assessments at least annually, and external compliance assessments at least once every 3 years. During the year in which an external compliance assessment occurs, installations are not required to conduct an internal compliance assessment. Major Commands (MAJCOMs) will determine and publicize the frequency of compliance assessments for minor and other installations

The revision to AFI 32-7045, para 1.1.2 allows for the exclusion of a site from ECAMP if it is determined that no significant environmental activity takes place on an installation or a specific site. Each MAJCOM must develop and maintain a list of excluded sites and the activities that take place on those sites, and include a brief rationale for each exclusion. The MAJCOM must review this list annually. Additionally, facilities can be exempted from the ECAMP if their inclusion in the program will significantly interfere with their military effectiveness or if it is otherwise in the best national interest. The MAJCOM commander is the approval authority for either exemption.

□

ECAMP PROGRAM MANAGEMENT PROCESS

ECAMP, a component of the Air Force EMS, is a systemic and continual improvement process consisting of an Environmental Compliance Assessment and a separate Environmental Management Self-Assessment. External assessments are coordinated and conducted by the MAJCOM while the internal assessment is coordinated and conducted by the installation. The Management Self-Assessment is a separate internal assessment activity [Revised June 1998].

Compliance assessments, both internal and external, are comprised of three phases of activity:

1. pre-assessment activities
2. site assessment activities
3. post-assessment activities.

Pre-assessment Activities - There are six key activities that should be completed before an assessment team begins the site assessment.

1. **Pre-visit Questionnaire** - The purpose of the pre-visit questionnaire is to collect information that will familiarize the assessment team with the installation and its operations so that its assessment team is able to review the applicable regulations and prepare a detailed assessment schedule. The pre-visit questionnaire is essential as part of the pre-assessment activities for an external assessment. It is also an excellent tool for ensuring internal assessment team members are starting from the same base of information. Appendix 1 contains a sample pre-visit questionnaire.

- 2. **Define Assessment Scope and Team Responsibilities** - The installation or MAJCOM may wish to place special emphasis on certain compliance categories or to review additional areas not covered in the volumes. These goals should be clearly stated so the assessment can be properly planned. Additionally, the duration of the assessment, appointment of team members by the EPC, and handling of tenants and off installation sites should be addressed. Typical teams may include personnel from: Environmental Coordinator (EC), Bioenvironmental Engineering (BEE), Judge Advocate (JA), Ground Safety Manager, Supply, Maintenance, Transportation, Defense Reutilization and Marketing Organization (DRMO), installation Civil Engineer (BCE), Water and Waste Superintendent, BCE (Contract Management), BCE (Natural Resources Manager), BCE (Fire Department), BCE (Engineering Design); or, if contracted, people with equivalent varied experience may be chosen. All assessment teams must have an Air Force team chief. Assessors must be objective and ensure that personal relations do not impair their decision-making. They must be afforded the opportunity to exercise free inquiry and judgment, and should not fear retribution. Assessors should possess a good working knowledge of the various environmental pollution statutes and regulations as well as a good working knowledge of the operations being assessed. Collectively, the team must have the knowledge and background required to efficiently and effectively conduct all aspects of an installation assessment. Team members should also understand appropriate techniques for collecting information and interviewing installation personnel. Team members should have received formal training or received oversight from someone who has received formal training. Finally, responsibilities for each of the checklists should be assigned to the team members as appropriate.

Appendix 2 lists the major environmental operations and activities at typical Air Force installations and the sections within which they are addressed. As shown, many activities and operations cause environmental impacts in more than one area, and are, therefore, addressed in more than one section.

3. **Review Relevant Regulations** - Once the assessment scope and responsibilities are known, the assessors should undertake a thorough review of the relevant federal, state, and local regulations, instructions and directives affecting the installation. One on-line data source of state regulations that is available to Air Force installations is DENIX. The applicable environmental regulations must be determined before the assessment begins. If not already available, checklist items for state and local requirements must be added to the checklists in these volumes.

4. **Develop Assessment Schedule** - The team should develop a detailed assessment schedule that includes the activities planned for each day.
5. **Review Assessment Protocols** - Each assessor should know the regulatory requirements and be familiar with the assessment checklists that will be used.
6. **Enforcement Vulnerability Analysis** - The AFCEE Regional Environmental Office (REO) are available to provide Enforcement Vulnerability Analysis (EVA) prior to ECAMPs. EVAs assist the team in addressing issues and ECAMP findings which are susceptible to enforcement by regulatory agencies. The appropriate REO should be contacted no later than 3 months prior to the ECAMP and requested to provide an EVA. All team members should review the EVA before the ECAMP visit. [Revised June 1998]

Site Assessment Activities - The assessment team chief must provide an in-brief to the installation commander at the start of the ECAMP visit. On-site, the assessors will conduct record searches, interviews, and site surveys to determine the compliance status of the installation. The assessment team review past ECAMP reports compiled since the last external ECAMP assessment. Operations are compared with environmental standards and any deficiencies are written up as findings. The data collected should be sufficient, reliable, and relevant to provide a sound basis for assessment findings and recommendations. Comments and findings are to be recorded daily to provide the information required to write the Preliminary Environmental Findings. During the assessment, the team should provide regular feedback to the installation commander on the evaluated activities so that as many findings as possible may be corrected immediately.

MAJCOMS are now allowed to select the database they want to use in recording findings. Figure 1 lists the information required as core data for all findings. A Finding Form should be completed for each finding during the assessment. These forms comprise the basis of the ECAMP report. The Finding Details portion of the core data is a factual statement describing the status of the process, permit, or situation under investigation. Further instructions for completing the core data start on page 17.

For example, a team member assigned to assess the installation's hazardous waste management program visited the accumulation point at building 5000. The installation is a small quantity generator (SQG). The assessor noticed some drums were damaged and took a count of the total number of drums and the number of damaged drums to get an accurate description for the finding. Three of the eight drums were rusted and bulging. Item HW.30.2 in Section 4 (in TEAM) states that 40 CFR 262.34(d)(2) and 40 CFR 265.171 require containers to be in good condition and not leaking. The damaged drums were behind the others, so the accumulation point manager may have overlooked them during his regular inspections. The accumulation point manager immediately put overpack drums on order. The Finding Details section would state "Three of the eight drums located at the accumulation point were rusted and bulging. The facility is classed as a SQG."

(NOTE: Any findings discovered through the use of this guidance supplement, by the internal assessment, should be validated by the environmental coordinator and Judge Advocate. The findings and corrective actions should be recorded in the EPC minutes.)

Post-Assessment Activities - MAJCOMs follow-up site assessment activities by tracking progress through reports, management action plans, and root cause analysis.

During the ECAMP assessment, relay deficiencies immediately to appropriate management personnel to allow corrective actions to begin. Correct those which are easy to fix on the spot or before the completion of the assessment. Note all observations in the assessment findings even if they are immediately corrected. Identify in the report any required construction projects, training or other funding needs so that they receive programming for execution through the A-106 process. Ensure root causes analysis is addressed to correct underlying systematic problems.

The installation commander must receive an out-brief on assessment results, which are based on the Preliminary Environmental Findings, prepared daily by the assessment team.

Following the compliance assessment, it is recommended that an opportunity assessment be conducted on processes which generate hazardous and non-hazardous wastes and other processes which require pre-treatment. Source reduction is the preferred method of pollution prevention. Opportunity assessment findings may be included in the ECAMP final report or provided to the installation commander in a separate document.

Following the compliance assessments, positive findings which could be considered benchmarking procedures shall be forwarded to MAJCOM for cross-feed consideration and inclusion in semi-annual report to DUSD(ES). Additional information should be forwarded to AFCEE for cross-feed to Air Force and other DOD agencies.

The MAJCOM EPC will coordinate the development of a management action plan, the Draft Final Environmental Compliance Assessment Report, and the Final Environmental Compliance Assessment Report. Management action plans and final reports should be completed and on file at the installation within 180 days of an external assessment and 120 days of an internal assessment. The ECAMP core data will be managed in a database that is selected by the MAJCOM.

Management Self-Assessment - To promote continuous management improvement, the MAJCOM may require periodic management self-assessment. The management assessment is intended as a self-improvement tool for individuals at all levels of environmental responsibility. It is recommended that unit and higher roll-ups of scoring/findings not be performed, but that the results be maintained and reviewed by the individual. Issues identified, which cannot be satisfied at the self-assessor level, should be elevated through the chain-of-command for resolution.

FIGURE 1: ECAMP CORE DATA
[Revised June 1998]

Required Field Name	Required Field Type	Required Field Type
MAJCOM	Text	50
Base	Text	50
Country	Text	50
State	Text	50
Finding Date	Med Date (DD-MMM-YY)	11
Protocol	Text	50
Finding Number	Text	50
Question Number	Text	50
Source	Text	50
Rating	Text	50
Repeat Finding?	Yes/No	1
Carryover Finding	Yes/No	1
Previous Finding Number	Text	50
Bldg Number	Text	50
Location	Text	100
Finding Title	Text	100
Finding Detail	Memo	unlimited
Citation	Text	140
Other Criteria	Text	140
Media by Law Code	Text	50
Finding ID Code	Text	50
Responsible Org	Text	60
Responsible Org POC	Text	50
POC Phone Number	Text	50
Suggested Action	Memo	unlimited
Corrective Action	Memo	unlimited
Corrective Action Cost	Currency	8
A-106 Project Number	Text	50
Status	Memo	unlimited
Estimated Completion Date	Med Date (DD-MMM-YY)	11
Actual Completion Date	Med Date (DD-MMM-YY)	11
Root Cause Code	Text	50
Last Update	Med Date (DD-MMM-YY)	11

Fields in BOLD print will be submitted to AFCEE from external assessments.

DEFINITIONS FOR CORE DATA
[Revised June 1998]

- **MAJCOM:** Enter the MAJCOM.
- **Base:** Enter the base name.
- **Country:** Enter the country.
- **State:** Enter the state, if applicable
- **Finding Date:** Enter the date the finding was discovered. This is the exact date the finding was discovered. Try to avoid using the same date for all findings. DD-MMM-YY (Convert Finding Date)
- **Protocol:** Using the selector, choose the protocol for this finding.
 - Air Emissions Management
 - Cultural Resources Management
 - Hazardous Materials Management
 - Hazardous Waste Management
 - Natural Resources Management
 - Other Environmental Issues
 - Pesticide Management
 - POL Management
 - Solid Waste Management
 - Storage Tank Management
 - Toxic Substances Management
 - Wastewater Management
 - Water Quality Management
- **Finding Number:** This field indicates the placement of this finding in the report. It may not have something to do with its priority or status depending on the philosophy of the program manager. Each protocol has it's own set of numbers. In other words, you can have a HW. 1 and an A.1.
- **Question #:** This is the question number from the ECAMP supplement or TEAM Guide.
- **Source:** Choose the appropriate source for the definition of the noncompliance.
 - U.S. Protocols
 - Worldwide Manual/Overseas Manual
 - Installation Supplement to ECAMP Manual
 - Command Supplement to ECAMP Manual
 - Country Manual
 - Country Supplement
 - State Supplement
 - Local Law/Ordinance
- **Rating:**
 - Significant** - A problem categorized as significant requires immediate action. It poses, or has a high likelihood of posing, a direct and immediate threat to human health, safety, the environment, or the installation mission.
 - Major** - Any finding that is out of compliance with Federal, state, or local laws. Major findings require future action to avoid potential threats to human health, safety, the environment, or the installation mission.
 - Minor** - Any finding that is out of compliance with DOD or AFIs at any level. Minor findings are generally administrative and procedural in nature.

Management Practice - Recommendations included for reducing environmental risks and improving environmental management. These recommendations are not based on environmental regulations and do not involve noncompliance. Instead they are management practices that, if followed, will help keep an installation in or ahead of compliance.

Positive - an observed condition, or management action in which an organization or individual has met and exceeded the compliance requirements, sought innovative and creative management techniques to achieve compliance, or improved operations to minimize environmental impact.

- **Repeat?:** Identify with a "Y" if this finding is a repeat finding. Has there been a finding documented in a prior ECAMP identical to this finding? If not, enter "N".
- **Carryover Finding?:** Identify with a "Y" if this finding is a carryover from the last ECAMP.
- **Previous Finding Number:** Enter previous finding number if a carryover finding.
- **Bldg Number:** Enter the building number.
- **Location:** Use this field if facility number or street address is not applicable. Briefly describe the location of the finding. You can use grid coordinates.
- **Finding Title:** Enter a brief, descriptive title for the finding (up to 51 characters).
- **Finding Details:** Enter a detailed description of the finding. State what is wrong, how the process or procedures are being done now, and how long it has been under way. State exactly how the AF is out of compliance. Be concise, objective, and strictly factual. Do not be subjective. Do not make inflammatory remarks.
- **Citation:** Enter the regulatory basis of the finding.
- **Other Criteria:** Enter all the laws, regulations, statutes, etc., other than the CFR citation, defining the out-of-compliance condition. You may also enter a brief description of those criteria (up to 192 characters).
- **Media by Law Code:** Choose the A-106 media that best matches the finding condition.

AT	Atomic Energy
CA	Clean Air Act
CW	Clean Water Act
ES	Endangered Species Act
FF	Fed Insect/Fungicide/Rodent Act
HP	Historic Preservation
MU	Multi-Media
NC	Noise Control
NE	National Environment Policy Act
RC	Resources Conservation and Recovery Act
SD	Safe Drinking Water Act
SF	Comprehensive Environmental Response Compliance and Liability Act
TS	Toxic Substance Control Act
- **Finding ID Codes:** Choose the appropriate code(s).

Air Emissions

- | | |
|-----|--|
| AE1 | Emissions Limits Or Operational Requirements Not Met |
| AE2 | Construction Permits Missing |
| AE3 | Permit Conditions Not Met |

- AE4 Sources Not Permitted
- AE5 Operating Permit Incomplete
- AE6 Emission Inventory Inaccurate
- AE7 ODC Management Deficiency
- AE8 Gasoline/Fuels Management
- AE9 Vehicle Emissions Testing
- AE10 Solvent Degreaser Deficiency
- AE11 Other (please indicate on the finding sheet the nature of the finding)

Cultural Resources Management

- CR1 Inadequate Historic Properties Management
- CR2 Inadequate Religious/Heritage Access
- CR3 Inadequate Archaeological/Native American Site Management
- CR4 Inadequate Collection Management and Curation
- CR5 Inadequate/Lacking Survey/Plans
- CR6 Other (please indicate on the finding sheet the nature of the finding)

Hazardous Materials Management

- HM1 Inadequate Storage Cabinet
- HM2 Inadequate Storage Room
- HM3 Storage Building Deficiency
- HM4 Inadequate Outside Storage
- HM5 Improper Storage Practice
- HM6 Compressed-Gas Storage Deficiency
- HM7 Bulk-Acid Storage Deficiency
- HM8 Fire Protection Deficiency
- HM9 Personnel Protective Equipment Deficiency
- HM10 Inadequate HAZCOM Program
- HM11 Improper/Lacking Reporting (EPCRA/Release)
- HM12 Inadequate Emergency Response Planning
- HM13 Laboratory Management Deficiency
- HM14 Transportation Deficiency
- HM15 Other (please indicate on the finding sheet the nature of the finding)

Installation Restoration Program (IRP)

- IR1 Inadequate/Lacking Restoration Advisory Board
- IR2 Record Keeping Deficiency
- IR3 Inadequate/Lacking Administrative Record
- IR4 Community Relations Plan Deficiency

- IR5 Improper IRP Site Management
- IR6 Other (please indicate on the finding sheet the nature of the finding)

Natural Resources Management

- NR1 Inadequate/Lacking Integrated Natural Resource Management Plan
- NR2 Ecosystem Management Deficiency
- NR3 Land Management Deficiency
- NR4 Range Management Deficiency
- NR5 Forestry/Silviculture Management Deficiency
- NR6 Agriculture/Grazing Management Deficiency
- NR7 Wetlands Deficiency
- NR8 Flora and Fauna Management Deficiency
- NR9 Threatened and Endangered Species Management Deficiency
- NR10 Other (please indicate on the finding sheet the nature of the finding)

Other Environmental Issues:

National Environmental Policy Act

- EO1 Lack of NEPA In Project Planning
- EO2 Inadequate Documentation/Record Keeping
- EO3 NEPA Other (please indicate on the finding sheet the nature of the finding)

Hazardous Waste Management

- HW1 Satellite Accumulation Point Deficiency
- HW2 90-day (180-Day for Small Quantity Generators) Accumulation Point
- HW3 TSD Facility Deficiency
- HW4 Lack of Characterization
- HW5 Transportation/Manifest Deficiency (except LDR)
- HW6 Unpermitted/Improper Disposal
- HW7 Unpermitted/Treatment
- HW8 Inadequate Waste Minimization
- HW9 Program Planning Deficiency
- HW10 Waste Analysis Characterization Planning Deficiency
- HW11 Facility-Wide Records Deficiency
- HW12 AFI/Procedural Records Deficiency
- HW13 Training Deficiency
- HW14 Land Disposal Restriction (LDR) Deficiency
- HW15 Other (please indicate on the finding sheet the nature of the finding)

Environmental Noise

- EO4 Inadequate/Lacking AICUZ

- EO5 Inadequate Management of Noise Complaints
- EO6 Range Noise Management Deficiency
- EO7 Noise Other (please indicate on the finding sheet the nature of the finding)

Program Management

- EO8 Improper Management of Ranges
- EO9 Inadequate A-106 Pollution Abatement Plan
- EO10 Environmental Baseline Study Deficiency
- EO11 Compliance Tracking/Reporting Deficiency
- EO12 Environmental Protection Committee Deficiency
- EO13 Inadequate WIMS-ES Management
- EO14 Program Management Other (please indicate on the finding sheet the nature of the finding)

Pesticides Management

- PM1 DOD Applicator Certification Deficiency
- PM2 Inadequate/Lacking Integrated Pest Management Plan
- PM3 Inadequate/Lacking Application Records
- PM4 Inadequate Storage Structures
- PM5 Improper Storage Practices
- PM6 Inadequate/Lacking Pesticide Inventory
- PM7 Contractor Application Deficiency
- PM8 Unapproved Pesticide Use
- PM9 Application Equipment Deficiency
- PM10 Inadequate Residue/Container Disposal
- PM11 Other (please indicate on the finding sheet the nature of the finding)

POL Management

- PO1 Spill Plan Deficiency
- PO2 Inadequate Spill Training
- PO3 Spill Cleanup Deficiency
- PO4 Inadequate Spill Equipment
- PO5 Service Stations Deficiency
- PO6 Marine Oil Transfer Deficiency
- PO7 Inadequate Loading Areas
- PO8 Inadequate Pipelines
- PO9 Inadequate Used Oil Management
- PO10 Other (please indicate on the finding sheet the nature of the finding)

Pollution Prevention

- PP1 Inadequate/Lacking Opportunity Assessment/Pollution Prevention Planning
- PP2 Inadequate Recycling Program
- PP3 Inadequate/Lacking Waste Minimization
- PP4 Inadequate Hazardous Substance Control and Reduction
- PP5 Improper Management of ODCs
- PP6 Inadequate Energy Conservation
- PP7 Inadequate/Lacking Affirmative Procurement
- PP8 Other (please indicate on the finding sheet the nature of the finding)

Solid Waste Management

- SW1 Improper/Unpermitted Disposal
- SW2 Landfill Management Deficiency
- SW3 Resource Recovery Facility Deficiency
- SW4 Improper/Unpermitted Storage
- SW5 Dumpster/Receptacle Deficiency
- SW6 Special Waste Materials Deficiency
- SW7 Medical Waste Deficiency
- SW8 Overseas Waste Deficiency
- SW9 Inadequate/Lacking Disposal Records
- SW10 Other (please indicate on the finding sheet the nature of the finding)

Storage Tank Management

- ST1 AF Tank Management
- ST2 AST Installation Deficiency
- ST3 AST Containment Deficiency
- ST4 AST Spill Reporting/Cleanup Deficiency
- ST5 UST Installation Deficiency
- ST6 UST Notification Deficiency
- ST7 UST Leak Testing Deficiency
- ST8 UST Removal Deficiency
- ST9 UST Spill/Leak Reporting/Cleanup Deficiency
- ST10 Other (please indicate on the finding sheet the nature of the finding)

Toxic Substances Management:**PCBs**

- TS1 Labeling Deficiency
- TS2 Inadequate/Lacking Inventory
- TS3 Storage Deficiency

- TS4 PCB Inspection Deficiency
- TS5 PCB Spill/Leaking Equipment
- TS6 Documentation Deficiency
- TS7 Exceeding 1 Yr Storage Time
- TS8 Equipment Management Deficiency
- TS9 PCB Other (please indicate on the finding sheet the nature of the finding)

Asbestos

- TS10 Labeling Deficiency
- TS11 Inadequate Container Management
- TS12 Inadequate Personnel Certification/Training
- TS13 Abatement Site Management Deficiency
- TS14 Inadequate/Lacking Survey/Plans
- TS15 Disposal Deficiency
- TS16 Improper Management of ACM
- TS17 Asbestos Other (please indicate on the finding sheet the nature of the finding)

Radon Mitigation

- TS18 Inadequate/Lacking Sampling
- TS19 Inadequate/Lacking Documentation
- TS20 Improper Notification
- TS21 Radon Other (please indicate on the finding sheet the nature of the finding)

Lead-Based Paint (LBP) Management

- TS22 Inadequate/Lacking Survey/Required Investigation
- TS23 Improper Sampling
- TS24 Inadequate/Lacking Documentation
- TS25 Improper Notification
- TS26 LBP Training Deficiency
- TS27 LBP Other (please indicate on the finding sheet the nature of the finding)

Wastewater Management

- WW1 Unpermitted Discharge
- WW2 Noncompliance with Discharge Permit
- WW3 Monitoring/Sampling Deficiency
- WW4 Discharge Monitoring Record Keeping Deficiency
- WW5 Oil/Water Separator Deficiency
- WW6 Collection System (e.g., lift stations, sewer lines, etc.) Deficiency
- WW7 Improper Wastewater Treatment Plant Operation
- WW8 Improper Sewage Sludge Disposal

WW9	Inadequate Treatment Plant Operator Training/Certification
WW10	Underground Injection Well (e.g., septic tanks) Management Deficiency
WW11	Fire Training Pit Deficiency
WW12	Storm Water Management Deficiency
WW13	Non-point Source Management Deficiency
WW14	Other (please indicate on the finding sheet the nature of the finding)

Water Quality Management

WQ1	Unpermitted Water Supply System
WQ2	Noncompliance With Withdrawal Permit
WQ3	Inadequate Water Source Protection
WQ4	Exceeding Water Quality Standard
WQ5	Monitoring/Sampling Deficiency
WQ6	Notification/Record Keeping Deficiency
WQ7	Water Tank/Reservoir Deficiency
WQ8	Filtration/Chlorination Facility Deficiency
WQ9	Distribution System Deficiency
WQ10	Backflow Prevention Deficiency
WQ11	Water Plan Operator Training/Certification Deficiency
WQ12	Water Quality Monitoring Record Keeping Deficiency
WQ13	Other (please indicate on the finding sheet the nature of the finding)

- **Responsible Organization:** Enter the organizations that “caused” the finding. You can enter up to 3 organizations. This is the “who done it” data field that can be used for trend analysis to find organizations that need additional training, equipment, manpower, etc.
- **Responsible Organization POC:** The individual interviewed.
- **POC Phone number:** The POC phone number.
- **Suggested Action:** Enter the suggested solution from the assessor. After validation, this is cannot be modified.
- **Corrective Action:** Action taken by the installation to correct the finding.
- **Corrective Action Cost:** Cost of the corrective action.
- **A-106 Project #:** If there is funding already programmed for the fix, enter the A-106 project number if available.
- **Status:** Indicate the status of the finding.
- **Estimated Completion Date (ECD):** What is the (DD-MMM-YY) that this finding will be brought into compliance?
- **Actual Completion Date (ECD):** What is the (DD-MMM-YY) that this finding was brought into compliance?

- **Root Cause:** Select the root cause that best reflects the basic reason for the out-of-compliance condition.

Plans and Implementation

PA ECAMP

- PA1** Assessments of inspections are not conducted by trained and qualified professionals
- PA2** Inadequate or conflicting guidance exists for conducting assessments or inspections
- PA3** Appropriate review and follow-up of self-assessment and/or inspection program are not conducted.

PE Emergency Plans

- PE1** Emergency plans and/or procedures are not established.
- PE2** Emergency plans and/or procedures are inadequate.
- PE3** System is not in place to properly coordinate the review and acceptance of new and/or updated plans and/or procedures.
- PE4** Emergency plans and/or procedures are not effective and/or properly implemented.

PM Management Action Plans (MAPs)

- PM1** MAPs are not established.
- PM2** MAPs are inadequate.
- PM3** System is not in place to properly coordinate the review and acceptance of new and/or updated MAPs.
- PM4** MAPs are not effective and/or properly implemented.

PP Environmental Management Plans

- PP1** Environmental management plans and/or procedures are not established.
- PP2** Environmental management plans and/or procedures are inadequate.
- PP3** System is not in place to properly coordinate the review and acceptance of new and/or updated plans and/or procedures.
- PP4** Plans and/or procedures are not effective and/or properly implemented.

PD Documentation/Regulations Tracking/Recordkeeping

- PD1** System not in place to track new or changing regulations.
- PD2** New regulatory requirements are not being incorporated into standard operating procedures.
- PD3** Regulations are misinterpreted or unknown.
- PD4** Document control system and record retention policy does not exist or is inadequate.

PC Compliance Tracking and Reporting

- PC1** Tracking system for key regulatory compliance deadlines does not exist or is inadequate.
- PC2** No formal mechanisms exist to investigate, report, correct, track, or monitor environmental problems and incidents.

Training and General Awareness

TC	Continuing Education
TC1	Personnel not trained
TC2	Personnel trained but course content inadequate
TC3	Insufficient skills to execute procedures properly (individual has received the proper training but is not proficient in skills)
TM	Mandated
TM1	Personnel not trained
TM2	Personnel trained but course content inadequate
TM3	Personnel trained but did not fully understand requirement
TM4	Training not properly documented
TG	General Awareness
TG1	Personnel not trained
TG2	Personnel trained but course content inadequate
TG3	Personnel trained but did not fully understand requirement

Command Emphasis/Oversight

CO	Management Organization and Oversight Implementation
CO1	Known deficient item, facility, or equipment, not formally identified for action/funding (not acting on a known deficiency)
CO2	Higher priority mission requirements took precedence
CO3	Insufficient skills to execute procedures properly (individual has received the proper training but is not proficient in skills)
CO4	Procedures have been developed and implemented but are not being followed
CO5	Inadequate manning
CO6	Environmental management does not participate at key strategic and operations planning meetings
CO7	Line manager(s) does not show commitment and/or responsibility for minimizing environmental impacts within operations area.
CO8	Environmental responsibilities are not clearly defined and understood by personnel.
CM	Contract Management
CM1	Contract documents are inadequate (e.g. specifications, statements of work do not hold contractor accountable for noncompliance with environmental requirements).
CM2	Contract documents are adequate but contractor does not fulfill requirements.
CR	Roles and Responsibilities
CR1	Personnel understood requirement, but simply forgot to act.
CR2	Environmental responsibilities are not clearly defined in job descriptions.
CR3	Environmental responsibilities are not included in performance standards.
CR4	Environmental responsibilities are not clearly defined and understood by personnel.

- CR5** Procedures have been developed and implemented but are not being followed.
- CP Policy Statement and Implementation**
 - CP1** Formal policies are not issued from an appropriate level of authority.
 - CP2** Existing policies conflict with environmental protection initiatives.
 - CP3** Formal statements of environmental goals and objectives are lacking.
 - CP4** Environmental requirements are not adequately considered when developing policies.
 - CP5** Environmental considerations are not adequately integrated into accomplishment of military missions.
- CC Communication**
 - CC1** Working relationships are ineffective within the organization.
 - CC2** Personnel concerns are not solicited, addressed, or documented.
 - CC3** The organization does not have a good working relationship with tenant agencies.
 - CC4** The organization does not have a good working relationship with external agencies.
- CI Procedures Implementation**
 - CI1** Procedures have not been developed.
 - CI2** Procedures have been developed but are inadequate.
 - CI3** Procedures have been developed but are not effectively implemented.

Resources

- RI Infrastructure/Facilities and Equipment**
 - RI1** Inadequate facility design
 - RI2** Equipment failure
- RP PPBS Process**
 - RP1** Deficient item, or equipment properly identified, but not funded
 - RP2** Deficient manpower properly identified, but not funded.
- RS Supplies and Contracts (documentation)**
 - RS1** Supplies have been ordered but have not been received.
 - RS2** Contract deliverables are not properly identified and/or delivered.
 - RS3** Time delay due to complex acquisition process.

External Factors

- EU Unforeseen Accident**
- EW Weather Related**
- EA Animal Activity**
- EV Acts of Vandalism**
- EG Acts of God**

Last Update: When the finding was last updated (DD-MMM-YY).

USING THE ECAMP SUPPLEMENT

Air Force installations engage in many operations and activities that can cause environmental impacts on public health and the environment if not controlled or properly managed. Many of these activities and operations are regulated by Federal, state, and local regulations, and by Air Force regulations/policies. After a review of these activities at Air Force it is apparent that there are major categories of environmental compliance into which most environmental regulations and Agency activities could be grouped. This supplement is divided into 13 sections that correspond to major compliance categories.

1. Air Emissions Management
2. Cultural Resources Management
3. Hazardous Materials Management
4. Hazardous Waste Management
5. Natural Resource Management
6. Other Environmental Issues
7. Pesticide Management
8. Petroleum, Oils, and Lubricants (POL) Management
9. Solid Waste Management
10. Storage Tank Management
11. Toxic Substances Management (includes asbestos, PCBs, radon, and lead-based paint)
12. Wastewater Management
13. Water Quality Management.

Each section is organized in the following format:

- A. Air Force Instructions (AFIs) and Policies.** This identifies, in summary form, the key AFRs, AFIs, and AFPDs that mandate requirements in the compliance category.
- B. Department of Defense (DOD) Directives and Instructions.** This identifies DOD Directives and Instructions which have not yet been implemented by an AFI.
- C. Using the TEAM Guide For ECAMP.** This portion identifies any portions of the Team Guide checklist that requires special information or guidance for use in ECAMP.
- D. Key Air Force/DOD Compliance Requirements.** This summarizes the significant compliance requirements associated with the regulations included in the checklist. It is a brief abstract summarizing the overall thrust of the regulations for that particular compliance category.
- E. Key Compliance Personnel.** This identifies the personnel on the installation who have compliance responsibilities for the compliance category.
- F. Key Air Force/DOD Compliance Definitions.** This presents definitions taken from the CFRs and pertinent AFRs and AFIs for those key terms associated with each compliance category.
- G. Additional Records To Review.** This is a list of records unique to an Air Force installation that need to be inspected in addition to the records listed in TEAM Guide.
- H. Additional Physical Features To Inspect.** This is a list of physical features unique to an Air Force installation that need to be inspected in addition to the physical features listed in TEAM Guide.
- I. People To Interview.** This is a list of Air Force personnel which should be interviewed in order to determine compliance with the checklist items in a particular section.

J. Compliance Assessment Checklists. The final portion of each section and its tables contain checklists composed of requirements or guidelines that serve as indicators to point out possible compliance problems, as well as practices, conditions, and situations that could indicate potential problems. They are intended to focus attention on the key compliance issues that should be investigated. Instructions are provided to direct the assessor to the appropriate action, references, or activity that corresponds to the specific requirement or guide.

USING THE CHECKLISTS

Understanding the layout and structure of the checklists facilitates their use during the assessment. Please see U.S. TEAM Guide for a sample of a portion of a checklist.

- **Explanation of Layout/Content.** The checklist portion of assessment section is divided into two columns. The first of these is a statement of a requirement. This may be a strict regulatory requirement, in which case the citation is given, or it may be a requirement that is considered to be a management practice to maintain compliance, but which is not specifically mandated by regulation.

The second column gives instructions to help conduct the compliance assessment. These instructions are intended to be specific action items that should be accomplished by the investigator. Some of the instructions may be a simple documentation check taking a few minutes; others may require physical inspection of a facility.

- **Checklist Item Numbering.** The checklist items are each assigned a three part number. The first part of the number indicates the section the checklist item is in (i.e., SO for Solid Waste Management, HW for Hazardous Waste Management). The second part of the number indicates the topic within the section. For example in the Solid Waste Management section of U.S. TEAM Guide, the first topic is All Installations (SO.1). In U.S. TEAM Guide the requirements for small quantity generators (SQGs) are spread out among several topic numbers. This second part increases by increments of five to provide for room to add new topics to the checklist. The third number indicates the placement of the checklist item within the topic. These checklist item numbers will be kept static from this year to next year. New checklist items will be added at the end of topics or inserted as entirely new topics.
- **Standard Checklist Items.** The first checklist item in each section of the supplement is standardized. It is a list of the Federal regulations that are required to be at the installation. It also includes a list of the Air Force documents that the installation should have on hand.

The assessment procedures are designed as an aid and should not be considered exhaustive. Use of the checklist requires the assessor's judgment to play a role in determining the focus and extent of further investigation. A review of appropriate state regulations should be conducted so additional review checklist items that reflect the substantive requirements of state/local regulations pertinent to individual facilities can be included on the checklists.

CUSTOMIZING THE CHECKLISTS FOR YOUR INSTALLATION

Creating Shop-Specific and Self-Inspection Checklists - The ECAMP checklists in this supplement and the TEAM Guide are a useful tool for creating self-inspection checklists for individual shops. These shop-specific checklists, can be used by shop supervisors and workers to ensure correct practices and procedures are being followed on a routine basis. Thus, good self-inspection checklists are an excellent supplement to annual ECAMP assessments. A customized checklist can be created in five steps:

1. review the shop's activities to determine which sections apply
2. select broad portions of the applicable sections for closer review by using the guidance page found before the checklist in each section
3. review the individual checklist items selected for application to the shop being assessed
4. edit the applicable checklist items to make them shop-specific
5. compile the checklist items.

Customized Checklist - For example, using these five steps, a customized checklist for a paint shop is derived as follows:

1. A paint shop has many environmental concerns - emissions from painting activities; proper storage of flammable and combustible liquids; hazardous waste accumulation point requirements; management of the solid waste receptacles at the shop; and discharge of solvents, stripping compounds and paint solids into the storm or sanitary systems. Protocols that apply are Air Emissions Management, Hazardous Materials Management, Hazardous Waste Management, Pollution Prevention Management, Solid Waste Management, and Water Quality Management.
2. Referring to the guidance pages in this supplement and the TEAM Guide, the following sections may apply to the paint shop: in Air Emissions Management, spray painting or surface coating operations (checklist item A.1.3); in Hazardous Materials Management, storage of flammable or combustible liquids (checklist items HM.35.1 through HM.40.3); in Hazardous Waste Management, small quantity generator requirements (checklist items HW.10.1 and HW.10.2, and HW.20.1 through HW.45.5); in Solid Waste Management, management of solid waste receptacles (checklist items SO.10.1 and SO.10.6); in Wastewater Management, discharge to treatment works (checklist items WA.25.1 through WA.25.9). See U.S. TEAM Guide for the applicable hazardous waste checklist items.
3. Most of these applicable checklist items can be easily rewritten to specifically address paint shop concerns. Using Hazardous Waste Management as an example, checklist items HW.20.1 through HW.45.5 are edited to delete interviews and inspections not applicable to this shop since it does not have hazardous waste storage tanks and it does not generate restricted wastes.
4. Finally, the edited checklist items are compiled.

WRITING THE ECAMP REPORT

[Revised June 1998]

All ECAMP documents prepared prior to the Final Environmental Report are internal working documents until the time that the Final Environmental Report is executed. They will be marked "For Official Use Only" and handled accordingly. The Air Force has determined that their premature release would jeopardize the Air Force's interest in preserving the free flow, analysis, and comment on internal information regarding environmental compliance. Therefore, except as otherwise required by law, ECAMP documents will not be released to the public sector prior to the execution of the Final Environmental Evaluation Report. The Final Environmental Compliance Assessment Report once approved by MAJCOM will be releasable under the Freedom of Information Act (FOIA). Consider requests for all other ECAMP documents only to the extent that the other documents were actually incorporated into the final report and to the extent that they represent purely factual information, as determined on a case-by-case basis in accordance with AFI 37-131, Air Force Freedom of Information Act Program. The formats found in AFI 32-7045 will be used for the report.

Each chapter of the assessment report should follow the described format:

Chapter 1. Executive Summary - The executive summary contains background information and a summary of findings, as follows:

- 1.1. Background** - The background contains the minimum essential information, such as date and location of the assessment, identification of the assessment team, and the overall assessment purpose. This section rarely exceeds one page and is needed by a reader who has not been involved with the assessment.
- 1.2. Summary of Findings** - This section includes positive and negative comments, major environmental issues, a summary of compliance status by protocol and the Environmental Compliance Summary Table.

Chapter 2.0. Background and Scope. This section is reserved for information that does not fit into the executive summary or the compliance findings section, but is necessary to make a complete report.

2.1. Background

- a. **ECAMP Objectives.** A statement of the ECAMP objectives as stated in this supplement and individual objectives unique to each specific assessment.
- b. **Installation Description.** Describe the major attributes of the installation.
- c. **Environmental Management System.** Describe in general how the installation's environmental management system is structured.

2.2. Scope

- a. **Activity Review.** Describe the base activities that were assessed (this is the appropriate section for positive findings). Comment on the state and local, or host nation regulations that were considered or used during the assessment.
- b. **Summary of Assessment Procedures.** A statement that the assessment included a review of documentation, inspection of facilities, and interviews of personnel.

Chapter 3.0. Environmental Compliance Status. This chapter contains both positive and negative finding details identified during the assessment. Negative findings that remain open from the last external ECAMP must be identified as carryover findings. Negative findings that were closed since the last ECAMP and have occurred again must be identified as repeat findings. Ensure that each finding is defined clearly and concisely describes that specific condition or action in a factual manner and is free of the evaluator's opinions. Each negative open finding will have a corresponding management action plan. Finding details are organized in this chapter in accordance with the Air Force and MAJCOM supplements to TEAM Guide to include protocols, report tables, etc.

GLOSSARY OF AIR FORCE ACRONYMS

[Revised January 1999]

ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACMI	air combat maneuvering instrumentation
AF	Air Force
AFBCA	Air Force Base Conversion Agency
AFCEE	Air Force Center for Environmental Excellence
AFCESA	Air Force Civil Engineering Support Agency
AFI	Air Force Instruction
AFIT	Air Force Institute of Technology
AFMAN	Air Force Manual
AFO	Accounting and Finance Office
AFOSH	Air Force Occupational Safety and Health
AFP	Air Force Pamphlet
AFPD	Air Force Policy Directive
AFPMB	Armed Forces Pest Management Board
AFR	Air Force Regulation
AFTO	Air Force Technical Order
AGE	aerospace ground equipment
HERA	<i>Asbestos Hazard Emergency Response Act</i>
AICUZ	Air Installation Compatible Use Zone Program
ANSI	American National Standards Institute
APHIS	Animal and Plant Health Service
AQCR	Air Quality Control Regions
AR	Army Regulations
ARPA	<i>Archeological Resources Protection Act</i>
ASME	American Society of Mechanical Engineers
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AU	Animal Unit
AUL	Authorized Users List
BACT	best available control technology
BASH	bird aircraft strike hazard
BAT	best available technology
BCE	Base Civil Engineer
BCP	Base Comprehensive Plan
BDPO	Base Disaster Preparedness Officer
BEE	Bioenvironmental Engineer
BES	Bioenvironmental Services
BFMO	Base Fuels Management Officer
BHWG	Bird Hazard Working Group
BOD	biochemical oxygen demand
BPAT	best practically available treatment
BRAC	Base Realignment and Closure
Btu	British thermal units
C	compliance
CAA	<i>Clean Air Act</i>
CAS	chemical abstract service
CATEX	categorical exclusion
CDC	Child Development Centers
CE	Civil Engineering

GLOSSARY OF AIR FORCE ACRONYMS **[Revised January 1999]**

CECORS	Civil Engineer Contract Reporting System
CEQ	Council on Environmental Quality
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
CESQG	conditionally exempt small quantity generator
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CFRTF	Crash Fire Rescue Training Facility
CHEMTREC	Chemical Transportation Emergency Center
CLC	corrected lead concentration
COE	Corps of Engineers
CPSC	Consumer Product Safety Council
CRM	Cultural Resources Manager
CRMP	Cultural Resources Management Plan
CS	communications squadron
CSO	combined sewer overflow
CW	Civil Works
CWA	<i>Clean Water Act</i>
CY	calendar year
DBMS	Director of Base Medical Services
DBOF	Defense Business Operations Fund
DCM	Deputy Commander for Maintenance
DCS	Deputy Chief of Staff
DENIX	Defense Environmental Network and Information Exchange
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DESCIM	Defense Environmental Security Corporate Information Management
DFR	Defense Fuel Region
DFSC	Defense Fuel Supply Center
DLA	Defense Logistics Agency
DMR	Discharge Monitoring Report
DNL	day night average sound level
DOD	Department of Defense
DODD	DOD Directive
DODI	DOD Instruction
DODM	DOD Manual
DODR	DOD Regulation
DOE	Department of Energy
DOI	Department of the Interior
DOT	Department of Transportation
DRMO	Defense Reutilization and Marketing Organization
DRMS	Defense Reutilization and Marketing Service
DUSD(ES)	Deputy Under-Secretary of Defense (ES?) pg. 15
EA	environmental assessment
EBS	Environmental Baseline Survey
EC	Environmental Coordinator
ECAMP	Environmental Compliance Assessment and Management Program
ECD	estimated completion date
EHS	extremely hazardous substance
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EM	Environmental Manager

GLOSSARY OF AIR FORCE ACRONYMS **[Revised January 1999]**

EMO	Environmental Management Office
EO	Executive Order
EOD	explosive ordnance
EPC	Environmental Protection Committee
EPCRA	<i>Emergency Planning & Community Right-to-Know Act</i>
EPF	<i>environmental planning functions</i>
ERA	Environmental Restoration Account
ESOH	<i>environmental safety and occupational health</i>
ETL	Engineering Technical Letter
EVA	Enforcement Vulnerability Analysis
FAA	<i>Federal Aviation Administration</i>
FEMA	Federal Emergency Management Agency
FIFRA	<i>Federal Insecticide, Fungicide, and Rodenticide Act</i>
FMFC	Fuels Management Flight Commander
FOE	Follow-on Element
FOF	<i>finding of fact</i>
FOIA	<i>Freedom of Information Act</i>
FONPA	finding of no practicable alternative
FONSI	finding of no significant impact
FOTW	Federally owned treatment works
FPO	Federal Preservation Officer
FS	feasibility study
FWS	Fish and Wildlife Service
GIS	Geographic Information System
GOCO	government owned, contractor operated
GSA	General Services Administration
GSU	geographically separated unit
HAZCOM	Hazard Communication
HAZMART	Hazardous Materials Pharmacy Office
HAZMAT	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCFC	hydrogenated chlorofluorocarbons
HHF	health hazard flag
HMMP	Hazardous Materials Management Process
HMMS	Hazardous Materials Management System
HMRPP	Hazardous Materials Reduction Prioritization Process
HPP	HAZMAT Pharmacy Program
HQ	headquarters
HSWA	Hazardous and Solid Waste Amendment
HUD	Housing and Urban Development (and Interim Guidelines)
IARC	International Agency for Research on Cancer Monographs
IC	Installation Commander
ICRMP	Integrated Cultural Resources Management Plan
IEX	issue exception code
IG	Inspector General
IMPAC	International Merchant Purchase Authorization Card
INRMP	Integrated Natural Resources Management Plan
IPM	Integrated Pest Management
IRE	Initial Response Element
IRP	Installation Restoration Program
ISCP	Installation Spill Contingency Plan

GLOSSARY OF AIR FORCE ACRONYMS **[Revised January 1999]**

ISS	Interim Status Standards
ITP	industrial toxics project
JA	judge advocate
LAER	lowest achievable emission rate
LBP	lead-based paint
LCCA	<i>Lead Contamination Control Act</i>
LD	lethal dose
LDR	land disposal restriction
LEPC	Local Environmental Protection Committee
LFM	liquid fuels maintenance
LGS	logistics
LPG	liquefied petroleum gas
LTi	lead toxicity investigation
MAJCOM	Major Command
MAP	Management Action Plan
MBtu	million British thermal units
MCL	maximum contaminant level
MFH	military family housing
MIPR	military interdepartmental purchase request
MLI	munitions list item
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MP	management practice
MPH	Military Public Health
MSD	marine sanitation device
MSDS	material safety data sheets
MSW	municipal solid waste
MSWLF	municipal solid waste landfill
MTR	military training route
MWR	morale, welfare, and recreation
N/A	not applicable
NAA	nonattainment areas
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NDA	National Defense Authorization
NEPA	<i>National Environmental Policy Act</i>
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NGB	National Guard Bureau
NHPA	<i>National Historic Preservation Act</i>
NIOSH	National Institute of Occupational Safety and Health
NM	nautical miles
NOI	notice of intent (to file an EIS)
NOV	notice of violation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPS	National Park Service
NRC	National Response Center
NSPS	New Source Performance Standards
NTP	National Toxicology Program

GLOSSARY OF AIR FORCE ACRONYMS **[Revised January 1999]**

O&M	Operations and Management
ODC	ozone depleting chemical
ODS	ozone depleting substances
OHSCP	Oil and Hazardous Substance Contingency Plan
OMB	Office of Management and Budget
OPR	Office of Primary Responsibility
OPREP	Operational Status Report
ORV	off-road vehicle
OSC	on-scene coordinator
OSHA	<i>Occupational Safety and Health Act</i>
PA	preliminary assessment
PA	programmatic agreement
PAO	Public Affairs Officer
PCB	polychlorinated biphenyl
PCMS	Project by Contract Management System
PDC	programming design and construction
PE	programs and evaluation
PHO	public health officer
PL	Public Law
POC	point of contact
POL	petroleum, oil, and lubricant
POTW	publicly owned treatment works
PPE	personal protective equipment
PPMP	Pollution Prevention Management Plan
PSD	prevention of significant deterioration
PVC	polyvinyl chloride
QAE	Quality Assurance Evaluator
QA/QC	quality assurance/quality control
QRP	Qualifying Recycling Program
QC&I	Quality Control and Inspection
RAC	risk assessment code
RACT	reasonably available control technology
RAMP	Radon Assessment and Mitigation Program
RCRA	<i>Resource Conservation and Recovery Act</i>
RCS	report control symbol
REO	regional environmental office
RI	remedial investigation
RMA	requires management action
ROD	record of decision
RPM	Remedial Project Manager
RQ	reportable quantity
RVP	Reid vapor pressure
SAF/AQ	Assistant Secretary for Acquisition
SAF/MIQ/MII	Secretary of the Air Force For Manpower, Reserve Affairs, Installations, and Environment
SARA	<i>Superfund Amendments and Reauthorization Act</i>
SBSS	Standard Base Supply System
SDWA	<i>Safe Drinking Water Act</i>
SEL	substrate equivalent lead
SF	standard form
SFO	Senior Fire Official

GLOSSARY OF AIR FORCE ACRONYMS **[Revised January 1999]**

SG	Surgeon General
SGOT	serum glutamic oxaloacetic transaminase
SGPT	serum glutamic pyuvic transaminase
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJA	Staff Judge Advocate
SLI	strategic list items
SOI	Secretary of the Interior
SOP	Standard operating procedure
SOS	Sources of Supply
SPCC	Spill Prevention, Control, and Countermeasure (Plan)
SPDES	State Pollution Discharge Elimination System
SPR	Spill Prevention and Response (plan)
SQG	small quantity generator
SRT	spill response team
SUA	special use airspace
SWDA	<i>Solid Waste Disposal Act</i>
TDY	temporary duty
TEAM	<i>The Environmental Assessment and Management (Guide)</i>
THM	trihalomethane
TIM	Technical Information Memorandum
TM	Technical Manual
TO	Technical Order
TPQ	threshold planning quantity
TRI	<i>toxics release inventory</i>
TSCA	<i>Toxic Substances Control Act</i>
TSD	treatment, storage, and disposal
TSDF	treatment, storage, and disposal facility
TSS	total suspended solids
TU	turbidity unit
UIC	Underground Injection Control
UL	Underwriters Laboratory
ULV	ultra low volume
UPC	Uniform Plumbing Code
USACE	United States Army Corps of Engineers
USACERL	U.S. Army Construction Engineering Research Laboratories
USAF	United States Air Force
USC	U.S. Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
VOC	volatile organic compound
WIMS-ES	Working Information Management System - Environmental Subsystem
WQA	<i>Water Quality Act</i>
XRF	x-ray fluorescence

COMMONLY USED ABBREVIATIONS

bbl	barrel	mg	microgram
C	Celsius	mm	micrometer
cm	centimeter	min	minute
cm ²	square centimeter	MJ	Megajoule
F	Fahrenheit	mo	month
ft	foot	mm	millimeter
ft ²	square feet	mrem	millirem
ft ³	cubic feet	MW	Megawatt
g	gram	ng	nanogram
gal	gallon	NM	nautical miles
gJ	gigajoule	NTU	nephelometric turbidity unit
h	hour	oz	ounce
hp	horsepower	pCi	picoCurie
in.	inch	ppm	part per million
J	Joule	psi	pound per square inch
kg	kilogram	psia	pounds per square inch absolute
km	kilometer	psig	pounds per square inch gauge
kPa	kilopascals	s	second
L	Liter	scf	standard cubic foot
lb	pound	scm	standard cubic meter
m	meter	V	volt
m ³	cubic meter	yd	yard
mg	milligram	yd ²	square yard
mi	mile	yr	year

Chemicals

CO	carbon monoxide	NO ₂	nitrogen dioxide
CO ₂	carbon dioxide	NO _x	nitrogen oxides
Hg	mercury	SO ₂	sulfur dioxide

Appendix 1: Sample Previsit Environmental Management Questionnaire		OPR	DATE		
ITEM			YES	NO	N/A

This questionnaire will provide background information necessary to plan and conduct an environmental compliance assessment.

Name of Installation: _____

Does this installation have any tenants, GOCOs or GSUs? If Yes, please list:

Air Emissions Management

1. Does installation operate one or more fuel burners?

a. Central steam plant?	—	—	—
b. Hot water?	—	—	—
c. Other? _____	—	—	—
d. Approximate size of fuel burner _____			

2. Are any hazardous or toxic air pollutants present in the installation's air emissions (e.g., beryllium, mercury, and vinyl chloride)?

	—	—	—
--	---	---	---

3. Is the installation subject to any of the following air emission standards:

a. Particulates?	—	—	—
b. NO _x ?	—	—	—
c. SO ₂ ?	—	—	—
d. Volatile organic compounds?	—	—	—
e. CO?	—	—	—
f. Toxic air pollutants?	—	—	—

If yes, please specify source of standards:

4. Does the installation operate any incinerators (i.e., for classified documents, medical waste, solid waste, etc.)?

	—	—	—
--	---	---	---

 - a. How many? _____
 - a. What type? _____

Attach list of locations.

5. Does the installation engage in:

a. open burning?	—	—	—
------------------	---	---	---

Appendix 1: Sample Previsit Environmental Management Questionnaire		OPR	DATE		
ITEM		YES	NO	N/A	
b. open detonation?		—	—	—	
c. fire fighter training?		—	—	—	
6. Does the installation use any solvent degreasers?		—	—	—	
7. Does the installation have a dry cleaning facility?		—	—	—	
8. Does the installation have a:					
a. spray painting operation?		—	—	—	
b. surface coating operation?		—	—	—	
Attach list of locations if answered yes to either.					
9. Have installation emissions resulted in complaints from the public due to:					
a. odors?		—	—	—	
b. fugitive dusts?		—	—	—	
c. other? _____		—	—	—	
10. Does the installation use air pollution control equipment?		—	—	—	
If yes, please list and explain:					

11. Does installation operate a motor vehicle station?		—	—	—	
12. Does the installation dispense fuel to motor vehicles?		—	—	—	
13. List each fuel storage area and the fuel type.					
Fuel type	Quantity	Fuel type	Quantity		
_____	_____	_____	_____		
_____	_____	_____	_____		
14. Does the installation have active aircraft operations?		—	—	—	
15. Does the installation have active aircraft maintenance operations?		—	—	—	
16. Does the installation have aerospace ground equipment (AGE) operations?		—	—	—	
17. Does the installation recycle/reclaim CFCs or Halons? Where?		—	—	—	
18. Please list any additional shop activities that generate any form of air pollution:					

Cultural Resources Management

1. Does the installation have a plan in place for managing the preservation of Native American and Hawaiian human remains and cultural artifacts?	—	—	—
2. Does the installation have an area which is designated as any of the following? (If so, please have maps indicating locations available for team on arrival):			
a. Cultural resource?	—	—	—
b. Archaeological resource?	—	—	—

Appendix 1: Sample Previsit Environmental Management Questionnaire				OPR	DATE
ITEM	YES	NO	N/A		

c. Historic structure?	—	—	—		
------------------------	---	---	---	--	--

Hazardous Materials Management

1. Does the installation store any flammable materials?	—	—	—		
2. Does the installation transport any hazardous materials off-installation?	—	—	—		
3. Does the installation have a procedure to ensure the proper labeling, packaging, and spill response for hazardous materials?	—	—	—		
4. Does the installation store:					
a. Acids?	—	—	—		
b. Caustics?	—	—	—		
c. Flammables?	—	—	—		
d. Combustibles?	—	—	—		
e. Compressed gases?	—	—	—		
f. Oxidizers?	—	—	—		

Hazardous Waste Management

1. Does the installation produce any wastes classified as:					
a. ignitable?	—	—	—		
b. corrosive?	—	—	—		
c. reactive?	—	—	—		
d. toxic?	—	—	—		
2. Which of the following classifications does the installation fall under?					
Conditionally Exempt Small Quantity Generator (generates less than 100 kg/mo)					
Small Quantity Generator (generates 100 - 1000 kg /mo)					
Generator (generates more than 1000 kg/mo)					
3. Does the installation operate a TSDF onsite?	—	—	—		
Permitted?_____					
Unpermitted?_____					
4. Does the installation treat or dispose of hazardous wastes onsite?	—	—	—		
If so, please specify waste type and treatment method:					

5. Does the installation accept wastes from other installations for treatment, storage, or disposal?	—	—	—		
6. Does the installation engage in the transportation of hazardous wastes:					
a. on the installation?	—	—	—		
b. off the installation?	—	—	—		
c. central transport (transportation squadron)?	—	—	—		
d. individual unit transport?	—	—	—		
7. Does the installation have a hazardous waste management (contingency) plan?	—	—	—		

Appendix 1: Sample Previsit Environmental Management Questionnaire				OPR	DATE
ITEM	YES	NO	N/A		
8. Does the installation have a spill, prevention, and response (contingency) plan?	—	—	—		
9. Does the installation utilize other locations for the treatment, storage, or disposal of hazardous waste?	—	—	—		
Please specify:					

10. Does the installation use any nonhazardous solid waste (including used oil) as a supplemental fuel source?	—	—	—		
11. Does the installation have a contractor dispose of its hazardous waste?	—	—	—		
Which office monitors this contract?					

Natural Resources Management

- | | | | |
|--|---|---|---|
| 1. Does the installation have an area designated as a natural resource, including highly protected and more generally protected? | — | — | — |
| 2. Does the installation have a plan for managing its natural resources? | — | — | — |
| 3. Are there any areas on the installation which have any of the following? (If so, please have maps indicating locations available for team on arrival.): | | | |
| a. Wetlands? | — | — | — |
| b. Floodplains? | — | — | — |
| c. Federally listed endangered or threatened species? | — | — | — |

Other Environmental Issues

Environmental Impact Analysis Process (EIAP)

- | | | | |
|---|---|---|---|
| 1. Does the installation civil engineering office perform Environmental Planning functions? | — | — | — |
| 2. Do they maintain copies of AF Form 813, <i>Request for Environmental Analysis</i> ? | — | — | — |
| 3. Does the Environmental Protection Committee review, and approve or disapprove environmental documents during the EIAP? | — | — | — |

Environmental Noise

- | | | | |
|--|---|---|---|
| 4. Does the installation have an active runway? | — | — | — |
| 5. Does the installation have any operations or maneuvers that produce environmental noise (i.e., target ranges, skeet range, helicopter pad)? | — | — | — |

Installation Restoration Program

- | | | | |
|---|---|---|---|
| 6. Is the installation currently on the National Priority List (NPL)? | — | — | — |
|---|---|---|---|

Appendix 1: Sample Previsit Environmental Management Questionnaire		OPR	DATE		
ITEM		YES	NO	N/A	

7. Does the installation currently have any designated IRP sites?		—	—	—	
---	--	---	---	---	--

8. If IRP sites are present, does the installation maintain documentation of all interim and final remedial actions or decisions in the IRP program?		—	—	—	
--	--	---	---	---	--

Location of documents

9. For installations with IRP sites, does the installation maintain the Administrative Record which details the physical situation at the installation?		—	—	—	
---	--	---	---	---	--

a. Is the location of the Record easily accessible to the public?

		—	—	—	
--	--	---	---	---	--

b. Does the installation periodically advertise location of Records and Procedures for assessments?

		—	—	—	
--	--	---	---	---	--

Pollution Prevention Management

10. Has the installation developed a pollution prevention management plan?		—	—	—	
--	--	---	---	---	--

11. Is a hazardous materials pharmacy operated?		—	—	—	
---	--	---	---	---	--

12. Are hazardous materials managed by the Hazardous Materials Pharmacy supplied through Standard Base Supply System (SBSS)?		—	—	—	
--	--	---	---	---	--

13. The Hazardous Material Pharmacy centrally manage materials from other sources of supply (i.e., COCESS, IMPAC, COPARS, NAF, MEDLOG, other installation contractors, local purchase, etc.)?		—	—	—	
---	--	---	---	---	--

14. Does the installation purchase recycled products? If yes, what?		—	—	—	
---	--	---	---	---	--

Program Management

15. Does the installation include all environmental projects listed in the Civil Engineering Contract Reporting System (CECORS) in the A-106 report?		—	—	—	
--	--	---	---	---	--

16. Does the installation have a single point of contact (POC) for the A-106 Pollution Abatement Plan?		—	—	—	
--	--	---	---	---	--

17. Who is responsible for the quality and dating of the automated A-106 (WIMS-ES)?					
---	--	--	--	--	--

18. Does the installation have a mechanism in place to ensure that the automated A-106 accurately reflects the project and requirement data maintained in other databases (CECORS, Programming Design and Construction (PDC), etc.)?		—	—	—	
--	--	---	---	---	--

19. Does the installation accurately reflect financial data (obligations, expenditures) in the A-106 systems?		—	—	—	
---	--	---	---	---	--

Pesticide Management

Appendix 1: Sample Previsit Environmental Management Questionnaire	OPR	DATE		
ITEM		YES	NO	N/A

- | | | | |
|--|---|---|---|
| 1. Does the installation use pesticides in regulated quantities? | — | — | — |
| 2. Do installation personnel apply pesticides? | — | — | — |
| 3. Does the installation hire contractors to apply pesticides? | — | — | — |
| 4. Are pesticide wastes disposed of at the installation? | — | — | — |
| 5. Are pesticides stored on the installation? | — | — | — |

Please list locations:

- | | | | |
|---|---|---|---|
| 6. Are medical records kept for individuals involved in the management of pesticides? | — | — | — |
| 7. Where are pesticides prepared at the installation? | | | |

Petroleum, Oil, and Lubricant (POL) Management

- | | | | |
|--|---|---|---|
| 1. Does the installation have a motor pool? | — | — | — |
| a. How many? _____ | | | |
| b. Locations _____ | | | |
| 2. Does the installation store oil in large volumes? | — | — | — |
| 3. Does the installation have a spill prevention and response plan? | — | — | — |
| 4. Does the installation's spill plan include provisions pertaining to hazardous substances or hazardous wastes? | — | — | — |
| 5. Does the installation conduct spill response training? | — | — | — |
| 6. Does the installation use fuel bladders during field exercises? | — | — | — |
| 7. Does the installation have any oil/water separators?
(Please have a map available for the team showing locations.) | — | — | — |
| 8. Does the installation use a hydrant system for aircraft fueling? | — | — | — |
| 9. Does the installation use fuel trucks for aircraft fueling? | — | — | — |

Solid Waste Management

- | | | | |
|---|---|---|---|
| 1. Does the installation have a solid waste management facility onsite? | — | — | — |
| 2. Does the installation have a: | | | |
| a. resource recovery facility (DRMO) on the installation? | — | — | — |

Appendix 1: Sample Previsit Environmental Management Questionnaire		OPR	DATE		
ITEM		YES	NO	N/A	
b.	resource recovery facility (DRMO) off the installation?	—	—	—	
c.	sanitary landfill?	—	—	—	
d.	construction debris landfill?	—	—	—	
e.	municipal solid waste landfill?	—	—	—	
f.	solid waste incinerator?	—	—	—	
g.	solid waste recycling program?	—	—	—	
3.	Does the installation have any unofficial landfill sites that are no longer in use?	—	—	—	
4.	Is waste transported off-installation for disposal:				
a.	in landfills?	—	—	—	
b.	in incinerators?	—	—	—	
c.	others (specify): _____	—	—	—	
5.	Does the installation dispose of ash residues or sludge:				
a.	onsite?	—	—	—	
b.	offsite?	—	—	—	
6.	Is the installation monitored for:				
a.	leachate?	—	—	—	
b.	groundwater?	—	—	—	
7.	Does the installation currently dispose of, or has it been used for the disposal of asbestos?	—	—	—	
8.	Does the installation generate pathological wastes?	—	—	—	
9.	Does the installation dispose of pathological wastes on installation by incineration?	—	—	—	

Storage Tank Management

1.	Does the installation have an aircraft fuel storage area?	—	—	—
	If yes, do storage tanks have properly sized and constructed containment dikes equipped with drains?	—	—	—
2.	Does the installation have an AAFES-run or other type of gas station located onsite?	—	—	—
	If yes, how many USTs are located at the gas station and what size are they?			

3.	Does the installation have any other USTs used to store petroleum products or hazardous materials?	—	—	—
	If yes, where are they located, how many are there, and what size are they?			

4.	Does the installation have any USTs used for storing heating fuel located at individual buildings?	—	—	—
	If yes, how many USTs are located at the gas station and what size are they?			

5.	Does the installation have any underground tanks out of service?	—	—	—

Appendix 1: Sample Previsit Environmental Management Questionnaire				OPR	DATE	
ITEM				YES	NO	N/A

If yes, provide locations.

6. Does the installation have any storage tanks containing hazardous waste? — — —

7. Does the installation have any storage tanks for used oil? — — —

Toxic Substances Management

PCBs

1. Are PCB (polychlorinated biphenyl) or PCB-contaminated fluids in use or stored on the installation in:

- | | | | |
|----------------------|---|---|---|
| a. transformers? | — | — | — |
| b. capacitors? | — | — | — |
| c. switch gear? | — | — | — |
| d. circuit breakers? | — | — | — |
| e. other? _____ | — | — | — |

2. Are there any PCB items in storage for disposal? — — —

Item	Concentration
_____	_____
_____	_____
_____	_____
_____	_____

3. Does installation dispose of PCBs or PCB-contaminated equipment on or offsite? — — —

Asbestos

4. Does the installation have Air Force-owned primary or secondary schools? — — —

5. Has the installation conducted a complete installation-wide asbestos facility survey? — — —

6. Does the installation have a written Asbestos Management Plan? — — —

7. Does the installation have a written Asbestos Operating Plan? — — —

8. Does the installation operate an in-house asbestos removal team? — — —

9. Has the installation undergone any asbestos removal projects in the past? — — —

10. Is there any asbestos on the installation that has been removed and is awaiting disposal at this time? — — —

11. Will the installation have any demolition, remodeling or renovation projects underway at the time of the ECAMP assessment? — — —

Please identify those projects and buildings:

Appendix 1: Sample Previsit Environmental Management Questionnaire			
		OPR	DATE
ITEM		YES	NO N/A

12. Does the installation maintain training records for asbestos workers? — — —
 Location of records —

13. Does the installation dispose of asbestos on the installation? — — —

Radon

14. Is the installation located in a geographic area where high levels of radon are typically found? — — —

15. Has the installation been monitored for radon? — — —
 Location of records —

Wastewater Management

1. Does the installation have any discharges of the following:
 a. Stormwater runoff from operational or storage area? — — —
 b. Stormwater runoff from undeveloped area? — — —
 c. Dredge and fill solids drainage water? — — —
 d. Wastewater treatment installation effluent? — — —
 e. Process wastewater? — — —
 f. Heat or power production cooling water? — — —
 g. Other? — — —

2. Does the installation discharge into a publicly owned treatment works (POTW)? — — —
 If yes, please specify types of discharge:
 (i.e., process wastewater, sanitary wastewater, etc.) —

3. Does the installation make use of an onsite wastewater treatment system prior to effluent discharge? — — —

4. Does the installation conduct any effluent monitoring? — — —

5. Are monitoring samples analyzed by:
 a. Installation personnel? — — —
 b. Offsite contractor? — — —

6. Does the installation have a separate stormwater runoff system? — — —

7. Does the installation have vehicle/aircraft washracks (or other designated vehicle/aircraft wash areas)? — — —

Appendix 1: Sample Previsit Environmental Management Questionnaire				OPR	DATE
ITEM		YES	NO	N/A	

Water Quality Management

- | | | | |
|--|---|---|---|
| 1. Does installation operate a public water system? | — | — | — |
| 2. Does the installation operate a community water system? | — | — | — |
| 3. Does the installation operate a noncommunity water system? | — | — | — |
| 4. Does the installation operate a nontransient, noncommunity water system? | — | — | — |
| 5. Does any portion of the installation's drinking water supply come from onsite wells or surface water sources? | — | — | — |
| 6. Does the installation monitor onsite drinking water sources? | — | — | — |
| 7. Does the installation provide filtration of its drinking water?
If yes, what type of treatment? _____ | — | — | — |

General Information

- | | | | |
|--|---|---|---|
| 1. Does the installation contain water protection areas? | — | — | — |
| 2. Is the installation suspected of contributing to a groundwater contamination problem? | — | — | — |

ATTENTION: The following records should be available for review by the assessment team either prior to the assessment or immediately upon arrival at the installation.

(NOTE: Not all installations will have, or are even required to have, all of the following documents.)

General

1. Detailed maps of the installation indicating street names and building numbers. Enough for one for every member of the assessment team.
2. A phone list.
3. Copies of Enforcement Actions issued to the installation in any of these areas.

Air Emissions Management

1. Air emissions inventory.
2. All air related permits.
3. A list of steam generating units and boilers and their size, fuel used, and locations.

Cultural Resources Management

1. Any cultural or archaeological resources surveys.
2. Management plans for cultural and archaeological resources.
3. A list of properties nominated for the National Register.

Hazardous Materials Management

1. A list of hazardous material storage/use areas.
2. A waste minimization plan.
3. MSDSs.
4. Documentation of personnel training.
5. The OHSPC plan.
6. A copy of any reports of spills.
7. Copies of the Tier I or Tier II reports.
8. Documentation on contaminated sites.
9. Toxic Release Inventory

Hazardous Waste Management

1. The Hazardous Waste Management Plan.
2. A list of hazardous wastes generated at the installation.
3. A list of waste generation/storage areas.
4. USEPA identification number.
5. Manifests.
6. Any permits.
7. The biennial report.
8. Personnel training records.

Natural Resources Management

1. The endangered species survey.
2. The Natural Resources Management Plan.
3. Any land management plans.
4. Recent EAs, EISs, FONSIIs, or NOIs.

Other Environmental Issues

1. Current EAs, FONSIIs, and EISs.
2. The AICUZ Study.
3. Noise complaints.
4. Pollution Prevention Management Plan.
5. Purchase orders for recycled materials.

6. CFC Halon purchase request.
7. The A-106.

Pesticide Management

1. The Pesticide Management Plan.
2. A list of pesticide storage sites.
3. Application records.
4. MSDSs for pesticides.
5. Personnel certifications for applicators.
6. Contracts for pesticide application.

POL Management

1. The SPCC plan.
2. A list of POL storage areas.
3. Upgrading and/or closure plans.

Solid Waste Management

1. Any contracts with waste haulers.
2. Any recycling plans.
3. All documentation pertaining to landfill operation or closure.
4. Records on groundwater sampling resulting from monitoring wells.

Storage Tank Management

1. A list of all USTs/ASTs and their locations.
2. Release detection documentation.
3. UST integrity test results.
4. Site contamination reports after tank removals.

Toxic Substances Management

1. The PCB inventory.
2. The PCB annual report.
3. The results of the asbestos survey.
4. The Asbestos Management Plan.
5. Radon survey results.
6. Lead-Based Paint survey.

Wastewater Management

1. All NPDES/SPDES permits.
2. Maps of the storm, sanitary, and industrial sewers.
3. A copy of pretreatment standards imposed on the installation.
4. A list of maintenance shops/operations to include wash facilities.
5. Locations of holding ponds, sedimentation pits, and open/end-of-pipe discharge points.

Water Quality Management

1. Copies of drinking water test results.
2. Copies of reports to the state.
3. Backflow devices inventory.

Appendix 2				
Major Activities/Operations	Sections			
	Air Emissions Management 1	Cultural Resources Management 2	Hazardous Materials Management 3	Hazardous Waste Management 4
1. Incinerators	•			•
2. Heat/Power Production	•			•
3. AGE Operation	•		•	•
4. Aircraft Operations	•		•	
5. Aircraft Maintenance	•		•	•
6. Fuel Storage	•		•	
7. Surface Coating Operations	•			•
8. Sanitary Wastewater				•
9. Stormwater Runoff			•	
10. Sludge Disposal	•			
11. POL Dispensing	•		•	
12. Wastewater Treatment			•	•
13. Vehicle Maintenance	•		•	•
14. Shop Activities	•		•	•
15. Solid Waste Generation				
16. Water Supply			•	
17. Toxic/Hazardous Materials Use			•	•
18. Firefighting Training	•			
19. PCB Electrical Equipment				
20. Pesticide/ Herbicide Use			•	
21. Environmental Noise				
22. Emergency Planning			•	
23. Asbestos Removal				
24. Underground Storage Tanks			•	
25. Remodeling Activities		•	•	•
26. Construction Activities	•	•	•	
27. Soil Removal		•		

Appendix 2 (continued)

Major Activities/Operations	Sections				
	Natural Resources Management	Other Environmental Issues	Pesticide Management	POL Management	Solid Waste Management
	5	6	7	8	9
1. Incinerators					•
2. Heat/Power Production				•	•
3. AGE Operation				•	
4. Aircraft Operations		•		•	
5. Aircraft Maintenance				•	
6. Fuel Storage				•	
7. Surface Coating Operations					
8. Sanitary Wastewater					
9. Stormwater Runoff	•		•		
10. Sludge Disposal					
11. POL Dispensing				•	
12. Wastewater Treatment			•		
13. Vehicle Maintenance				•	
14. Shop Activities			•	•	•
15. Solid Waste Generation					•
16. Water Supply					
17. Toxic/Hazardous Materials Use		•	•		
18. Firefighting Training	•			•	
19. PCB Electrical Equipment		•			
20. Pesticide/Herbicide Use		•	•		
21. Environmental Noise		•			
22. Emergency Planning			•	•	
23. Asbestos Removal					
24. Underground Storage Tanks					
25. Remodeling Activities	•	•			
26. Construction Activities	•	•			
27. Soil Removal	•				

Appendix 2 (continued)				
Major Activities/Operations	Storage Tank Management 10	Toxic Substances Management 11	Wastewater Management 12	Water Quality Management 13
1. Incinerators				
2. Heat/Power Production	•	•	•	•
3. AGE Operation	•		•	•
4. Aircraft Operations				•
5. Aircraft Maintenance	•		•	•
6. Fuel Storage	•			
7. Surface Coating Operations	•		•	•
8. Sanitary Wastewater	•		•	
9. Stormwater Runoff			•	
10. Sludge Disposal			•	
11. POL Dispensing	•			
12. Wastewater Treatment	•		•	
13. Vehicle Maintenance	•		•	
14. Shop Activities	•	•	•	•
15. Solid Waste Generation				
16. Water Supply			•	•
17. Toxic/Hazardous Materials Use	•	•	•	
18. Firefighting Training			•	
19. PCB Electrical Equipment		•		
20. Pesticide/ Herbicide Use			•	
21. Environmental Noise				
22. Emergency Planning	•			
23. Asbestos Removal		•		
24. Underground Storage Tanks	•			
25. Remodeling Activities	•	•		
26. Construction Activities		•	•	
27. Soil Removal				

SECTION 1

AIR EMISSIONS MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 32-7040, *Air Quality Compliance*. This AFI, dated 9 May 1994, identifies the requirements for an air quality compliance program.
- Air Force Technical Order (AFTO) 00-20B-5, *USAF Motor Vehicle and Vehicular Equipment Inspections*. This TO establishes procedures for vehicle inspection and reporting on vehicle emissions.

B. Department of Defense (DOD) Directives and Instructions

- Department of Defense Instruction (DODI) 4715.6, *Environmental Compliance*. This DODI, dated 24 April 1996, implements policy, assigns responsibility, and prescribes procedures for achieving compliance with applicable Executive Orders (EO) and Federal, state, interstate, regional, and local statutory and regulatory environmental requirements. This DODI also designated the DOD Executive Agents to lead DOD implementation of key environmental issues. This DODI does not apply to the operations of U.S. military aircraft or to off-installation operational and training deployments. The Executive Agent for air quality is the Navy.

C. Using the TEAM Guide For ECAMP

- Review all permits, interview boiler operators, check operation of degreasers in the shops, and review operation of all incinerators.

D. Key Air Force/DOD Compliance Requirements

- Emissions Inventory - Installations are required to prepare and periodically update a comprehensive installation air emissions inventory (AFI 32-7040, para 2.8).
- Motor Vehicles - All Air Force vehicles will be tested with an infrared exhaust tester (for gasoline engines) or an opacity meter (for diesel engines) to certify exhaust emissions if required by state or local laws (AFTO 00-20B-5, Section 2-6).

E. Key Compliance Personnel

- The Installation Commander. The Installation Commander, or Vice Commander, is usually the person responsible for compliance and signs all permits.
- The Base Civil Engineer (BCE). The BCE is responsible for the maintenance of incinerators and fuel handling and storage equipment, as well as the operation and maintenance of all fuel burners (including boilers). The heating and boiler plants are responsible for the operation of fuel burners and are a part of the Operations Branch of Base Civil Engineering.
- The Environmental Manager. The Environmental Manager is responsible for the preparation of all air pollution emission source permit applications.

- The Regional Hospital or Base Clinic. The regional hospital or installation clinic is responsible for the operation of any pathological incinerators located in their facility.
- The Fuels Management Branch. The Fuels Management Branch of Base Supply is responsible for the operation of all fuel handling, transportation (tanks and or pipelines), and storage facilities on installation. They are also responsible for making sure that all fuels satisfy specifications, including state mandated sulfur content. The fuels management branch is also responsible for the operations of the military service station that dispenses leaded or unleaded fuel.
- The Vehicle Maintenance Branch. The Automotive Maintenance Branch of Base Transportation is responsible for the emission testing and vehicle maintenance required by the state and AFIs.
- The Maintenance Squadrons. The various maintenance squadrons at the installation are responsible for the operation of degreasers and other industrial processes that are regulated or may require operating permits.
- The Base Exchange. The exchange operates a service station that dispenses leaded fuels and is subject to the Federal requirements. The service station is normally operated by a contractor, but the labeling and nozzle size regulations still apply. The Government is responsible for compliance, but the contractor may also be responsible, depending on the contract wording. The exchange may also stock aerosol containers which contain halons.
- The Bioenvironmental Engineer (BEE). The BEE is responsible for monitoring ambient air quality and preparing the installation air emission inventory.

F. Key Air Force/DOD Compliance Definitions

- None

G. Additional Records To Review

- Agency air pollution control regulations
- Plans and procedures applicable to air pollution control

H. Additional Physical Features To Inspect

- Aerospace coating

I. People To Interview

- BCE (Environmental Planning)
- BEE
- Air Pollution Source Operators
- Fuels Management Branch
- Transportation and Maintenance Branch
- Base Supply (LGS)
- Judge Advocate General

J. Guidance for Air Force Supplement Air Emissions Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	AE.1.1 and AE.1.2
Missing Checklist Item	AE.2.1
Vehicle Emissions	AE.135.1

<p align="center">COMPLIANCE CATEGORY AIR EMISSIONS MANAGEMENT U.S. TEAM Guide: ECAMP Supplement</p>	
<p align="center">REGULATORY REQUIREMENTS:</p>	<p align="center">REVIEWER CHECKS: September 1999</p>
<p>AE.1</p> <p>ALL INSTALLATIONS</p> <p>AE.1.1. Copies of all relevant Federal, state, and local regulations on air emissions should be maintained at the installation (MP) [Revised June 1998].</p>	<p>Verify that copies of the following regulations are maintained and kept current at the installation:</p> <ul style="list-style-type: none"> - 40 CFR 60, <i>Standards of Performance for New Stationary Sources.</i> - 40 CFR 61, <i>National Emission Standards for Hazardous Air Pollutants.</i> - 40 CFR 80, <i>Regulation of Fuels and Fuel Additives.</i> - 40 CFR 82, <i>Protection of Stratospheric Ozone.</i> - 40 CFR 240, <i>Guidelines for the Thermal Processing of Solid Waste.</i> - AFI 32-7040, <i>Air Quality Compliance.</i> - AFI 48-119, <i>Medical Services Environmental Quality Programs.</i> - AFTO 00-20B-5, <i>Motor Vehicles and Vehicular Equipment Inspection.</i> - applicable state and local regulations. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that affect ongoing and proposed activities and keeps the Environmental Protection Committee (EPC) informed as necessary.</p>
<p>AE.1.2. Installations are required to prepare and periodically update a comprehensive installation air emissions inventory (AFI 32-7040, para 2.8 and 48-119, para 9.5.1.2).</p>	<p>Verify that the installation has done an air emissions inventory and it is periodically updated and coordinated with the repository custodian, Armstrong Laboratory.</p> <p>Verify that a copy of the inventory is maintained at Bioenvironmental Services (BES).</p>

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AIR EMISSIONS MANAGEMENT
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REGULATORY REQUIREMENTS:	REVIEWER CHECKS September 1999
<p>AE.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>AE.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

COMPLIANCE CATEGORY AIR EMISSIONS MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
AE.135 VEHICLE EMISSIONS AE.135.1. All Air Force vehicles will be tested with an infrared exhaust tester (for gasoline engines) or an opacity meter (for diesel engines) to certify exhaust emissions if required by state or local laws (AFTO 00- 20B-5, Section 2-6).	<p>Verify that the required testing is performed annually in conjunction with the annual safety inspection, or more often if required by local laws, by interviewing the transportation maintenance chief.</p> <p>Verify, by inspection, that the exhaust gas analyzer is operable.</p> <p>Determine schedule for calibration of the equipment and verify that the schedule is met.</p> <p>Verify that civilian and military mechanics know how to operate the infrared exhaust analyzer and/or opacity meter.</p> <p>Verify that the testing is performed by a mechanic thoroughly trained in the operation of the specific engine analyzing equipment.</p> <p>Verify that inspection results are properly recorded for Air Force vehicles by reviewing the Emission Test Records.</p>

SECTION 2

CULTURAL RESOURCES MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 32-7065, *Cultural Resources Management*. This AFI, dated 13 June 1994, provides guidance for protecting and managing cultural resources. It outlines the requirements for the Cultural Resources Management Plan (CRMP), training, and the nomination process. See Appendix 2-1 for a flowchart of the Section 106 process within the Air Force.

B. Department of Defense (DOD) Directives and Instructions

- Department of Defense Instruction (DODI) 4715.3, *Environmental Conservation Program*. This instruction, dated 03 May 1996, does the following:
 1. implements policy, assigns responsibilities, and prescribes procedures for the integrated management of natural and cultural resources on property under DOD control
 2. authorizes the publication of A Resource Manager's Guide to Volunteer and Partnership Programs and A Guide to Integrated Natural Resources Management
 3. establishes the DOD Conservation Committee that reports to the Environmental Safety and Occupational Health (ESOH) Policy Board
 4. designates DOD Executive Agents to lead DOD implementation of key conservation issues as listed in the following table:

Executive Agent	Conservation Issue
Navy	Chesapeake Bay Program
Navy	Gulf of Mexico Program
Army	Mojave Desert Ecosystem Initiative
Navy	Partners In Flight Initiative
Air Force	Biodiversity Initiative
Navy	Coastal America Initiative
Air Force	Cold War Initiative
Army	DOD Forestry Reserve Account Program

C. Using the TEAM Guide for ECAMP

- Review MOAs and ensure that the agreed upon measures are being carried out.

D. Key Air Force/DOD Compliance Requirements

- Training - Air Force personnel are required to be trained about cultural resources as appropriate to their responsibilities (AFI 32-7065, para 9.1).
- CRMP - The CRMP must include specific information such as assigned responsibilities, standard operating procedures, an inventory of all known cultural resources, and other information needed for management of cultural and historic resources (AFI 32-7065, para 2.2 and DODI 4715.3, para D3(c) and Enclosure 7).

- **Surveys/Maps** - A field survey of the installation must be done according to the Secretary of the Interior's (SOI's) standards. This inventory must also be placed on the Work Information Management System - Environmental Subsystem (WIMS-ES). The installation must maintain current maps indicating the location of cultural resources (AFI 32-7065, para 8.1 and 8.2).

E. Key Compliance Personnel

- **Base Civil Engineering (BCE)/Environmental Manager (EM).** The BCE/EM is responsible for funding, supervising, controlling, and managing the installation's historic preservation program.
- **Cultural Resources Manager (CRM).** The CRM is responsible for implementing the historic preservation program, and locates, inventories, and evaluates installation cultural resources.

F. Key Air Force/DOD Compliance Definitions

- ***Adverse Effect*** - changes that may diminish a historic property's integrity in terms of location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to (AFI 32-7065, Attachment 1):
 1. physical destruction, damage, or alteration of all or a part of the property
 2. isolation of the property from or altering the character of the property's setting when that character helps qualify the property for the National Register
 3. introduces visual, audible, or atmospheric elements out of character with the property or that alters its setting
 4. neglect of a property that results in its deterioration or destruction
 5. transfer, lease, or sale of the property.
- ***Archaeological Permit*** - a legal authorization from Archaeological Resources Protection Act (ARPA) to conduct an archaeological survey or investigation including surface collecting or subsurface testing on Federal land. The Air Force issues such permits for archaeological activities that take place on Air Force controlled land. Federal employees or contractors do not need the permit because the statement of work provides the same information as the permit (AFI 32-7065, Attachment 1).
- ***Assessment of Effect*** - a process to determine if an undertaking may affect the qualities of a property that make it eligible for the National Register. Installation Commanders make the assessment in consultation with the SHPO (AFI 32-7065, Attachment 1).
- ***Conservation Self-Assessment*** - a multimedia inspection or evaluation of an installation's natural and cultural resource program. External conservation self-assessments are conducted by designated DOD representative from outside the installation being inspected. Internal conservation self-assessments are usually conducted by installation personnel (DODI 4715.3, Enclosure 3).
- ***Consultation*** - a process initiated by the Installation Commander in which the Commander confers with the SHPO to reduce or avoid adverse effects on historic properties. The Advisory Council on Historic Preservation (ACHP) and certain interested persons may participate as consulting parties (AFI 32-7065, Attachment 1).
- ***Determination of Eligibility*** - a process to determine if a property is eligible for the National Register of Historic Places. National Register of Historic Places allows 10 or 45 day determinations. An eligible property receives the same treatment as a registered property pending completion of the nominating process (AFI 32-7065, Attachment 1).
- ***Federal Historic Preservation Officer (FPO)*** - the person who coordinates the agency's activities under National Historic Preservation Act (NHPA) and EO 11593, including nominating agency properties for the National

Register. The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MIQ) is the Air Force FPO (AFI 32-7065, Attachment 1).

- *Historic Property* - physical remains of any prehistoric or historic district, site, building, structure, or other object significant in American history, architecture, archaeology, engineering, or culture that is in or is eligible for the National Register. Historic properties include related artifacts, records, and remains (AFI 32-7065, Attachment 1).
- *Integrated Cultural Resources Management Plan (ICRMP)*- a plan that defines the process for the management of cultural resources on DOD installations (DODI 4715.3, Enclosure 3).
- *Memorandum of Agreement (MOA)* - an agreement involving an installation, the Advisory Council on Historic Preservation (ACHP), and the State Historic Preservation Office specifying how the installation or agency will manage an activity or historic property. An agreement typically identifies legal requirements, responsibilities, historic features, protection measures, and coordinating mechanisms (AFI 32-7065, Attachment 1).
- *Programmatic Agreement (PA)* - a document similar to an MOA to manage recurring or similar projects. A programmatic agreement allows an agency to benefit from ACHP consultations while eliminating the need to refer to individual actions that adhere to the agreement to the ACHP. The agreement satisfies requirements of Section 106 of the NHPA of 1966. An installation can execute a PA with the State Historic Preservation Office, Council, and other parties under which the installation's historic preservation plan is substitutes for the standard review, determination of eligibility, consultation, and agreement processes (AFI 32-7065, Attachment 1).
- *Significance* - attributes or characteristics of a property that qualify it for the National Register (AFI 32-7065, Attachment 1).

G. Additional Records To Review [Revised October 1998]

- Cultural Resources Inventory/Survey/Site Forms or reports
- CRMP
- Reports of MAJCOM and HQ USAF Staff Assistance Visits
- Nominations to the National Register of Historic Places
- Correspondence with the SHPO pertaining to current actions

H. Additional Physical Features To Inspect

- Military training areas

I. People To Interview

- Cultural Resources Manager
- Environmental Coordinator

J. Guidance for Air Force Supplement Cultural Resources Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	CR.1.1 through CR.1.11
Missing Checklist Items	CR.2.1
Miscellaneous Checklist Items (NOTE: All of the checklist items formerly in CR.4 have been moved to CR.1.)	CR.4.1 through CR.4.4
Historic Properties	CR.5.1
Archaeological/Indian Sites	CR.15.1 through CR.15.3

Appendix 2-1, Deleted

Appendix 2-2, *Programming and Budgeting Priorities for Conservation Programs.*

Appendix 2-3, *Conservation Measures of Merit.*

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>CR.1.3. The CRM should be included in the coordination process for all actions that may impact the installations' cultural resources (MP).</p> <p>CR.1.4. The management and control of cultural resources under DOD control will not be contracted (DOD 4715.3, para D1(m)) [August 1996].</p> <p>CR.1.5. Conservation self assessments are required to be done according to specific parameters (DODI 4715.3, para D1(c)) [August 1996].</p> <p>CR.1.6. Current and planned installation programs, plans, and projects are required to be integrated and compatible with cultural resources programs, plans, and projects (DODI 4715.3, para F1(b)) [August 1996].</p> <p>CR.1.7. Prior to disposal of property, significant cultural resources must be identified (DODI 4715.3, para F1(I)) [August 1996].</p>	<p>Determine if the CRM is included in the coordination process for all actions that may impact the installations' cultural resources.</p> <p>Verify that the management and control of cultural resources under DOD control, including planning, implementation, and enforcement functions, are not contracted.</p> <p>(NOTE: DOD Components that have contractor-operated installations or facilities are required to ensure that contract instruments clearly address contractor and government functions as they relate to cultural resources.)</p> <p>Verify that internal self assessments are done annually at all installations that require an CRMP.</p> <p>Verify that external conservation self assessments are done at least once every 3 yr at all installations that require an CRMP.</p> <p>Verify that, at a minimum, the reviews assess adherence to the funding priorities in Appendix 5-2 and the status of the measures of merit in Appendix 5-3.</p> <p>Verify that current and planned installation programs, plans, and projects are integrated and compatible with cultural resources programs, plans, and projects.</p> <p>(NOTE: Examples of plans and projects include training and test range management plans, master plans, integrate pest management plans, endangered species recovery plans, golf course management plans, grounds maintenance plans, facilities construction site approvals, and other land use activities.)</p> <p>Verify that all significant cultural resources have been identified and a determination made of whether they may be affected by the disposal action</p> <p>Verify that disposal plans are provided to appropriate agencies, organizations, and individuals and a reasonable opportunity for review and comment is provided before proceeding with disposal.</p>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
CR.1.8. Installations with cultural resources are required to have a CRMP (AFI 32-7065, para 2.2 and DODI 4715.3, para D3(c) and Enclosure 7) [Moved April 1999] .	<p>Verify that museum objects and documents are identified and preserved.</p> <p>(NOTE: This was originally checklist item number CR.4.1. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Determine if the installation has any cultural resources.</p> <p>Verify that the CRMP conforms to local, state, and Federal preservation programs.</p> <p>Verify that the installation consulted the SHPO during the development of the CRMP.</p> <p>Verify that the CRMP is updated annually, integrated into the Base Comprehensive Plan (BCP), and approved by the MAJCOM every 5 yr.</p> <p>Verify that the CRMP generally does the following:</p> <ul style="list-style-type: none"> - includes a summary of general information about the installation's mission and history, as well as specific management information necessary for managing the installation cultural resources - provides cultural resources context information about the installations mission and history - identifies all legal requirements pertinent to cultural resources management - identifies the installations' cultural resources - recommends procedures for managing installations cultural resources in a manner that is compatible with the installation mission and satisfies legal requirements - establishes priorities for cultural resources management that ensure compliance with legal requirements and ongoing stewardship responsibilities - provides management procedures for ongoing identification, maintenance, and enhancement of cultural resources - promotes the use of cultural resources in ways that are beneficial to the military mission, the resources, and other public interests - is thoroughly integrated with other installation plans, including the Installation Natural Resources Management Plan (INRMP), the installation master plan, the facilities maintenance plan, training and range management plans, mobilization and deployment plans, and information management systems - establishes requirements, goals, and targets that can be easily reflected in budget documents and decisionmaking processes, and addressed in conservation self-assessments - addresses cultural resources from both technical and policy standpoints.

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
	<p>Verify that the installation has a CRMP that contains the following:</p> <ul style="list-style-type: none"> - assignment of responsibilities for recognizing and maintaining cultural resources - an inventory and evaluation of all known cultural resources - identification of the likelihood of the presence of other significant unknown cultural resources - a description of installation strategies for maintaining cultural resources and for achieving compliance - standard operating procedures and action plans that include budget, staffing, and scheduling of activities - coordination with the installations mission and identification of the impacts on cultural resources of ongoing mission functions and the resolutions to those impacts. <p>Verify that the CRMP specifically includes:</p> <ul style="list-style-type: none"> - analysis of the sufficiency of existing information on cultural resources and associated contexts to meet compliance requirements - information on areas that have not been inventoried and a plan for completion of the inventory - identification and prioritization of action required to implement goals and objectives of the plan - procedures to ensure that actions of the installation and its tenants are planned and carried out in ways that protect and enhance cultural resources - preservation and mitigation strategies for threatened cultural resources - coordination processes between the installation, regulatory agencies, and the public that help to ensure proper management of an installation's cultural resources - provisions for permanent storage of historic property records, and other record keeping requirements - standard operating procedures for routine occurrences and where blanket statements can coordinate a process, such as inventories, repetitive maintenance and repair, unexpected discovery and reporting, and spill responses where cultural resources are involved and tailored for the particular installation - procedures for the documentation of historic properties that will be altered or destroyed as a result of DOD action or assistance in accordance with 36 CFR 79 - procedures for consulting with all interested groups and individuals that represent an interest in cultural resources - procedures for anticipated discovery of an historic property or other cultural resources - procedures to ensure that all archaeological collections are properly processed, maintain, and preserved in accordance with 32 CFR 22 - provisions for sharing appropriate cultural resources information with

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>CR.1.9. Installations with no known cultural resources are required to have a contingency CRMP (AFI 32-7065, para 2.2.5) [Moved April 1999].</p>	<p>Federal and state agencies, nongovernmental organizations, researchers, and the general public</p> <ul style="list-style-type: none"> - provisions for enforcement of cultural resource laws and regulations by professionally trained personnel - provisions for public access to cultural resources, as appropriate. <p>(NOTE: The following suggested format is explained in detail in Attachment 3 of AFI 32-7065:</p> <ul style="list-style-type: none"> - Executive Summary - General Information <ul style="list-style-type: none"> - Mission Statement - Historical Perspective - Organizational Listing and Roles - Goals and Objectives - Program Responsibilities - Cultural Resources Inventory <ul style="list-style-type: none"> - Prehistoric Resources <ul style="list-style-type: none"> - Prehistoric Framework - Literature Review - Resource Inventory - Areas of Concern - Historic Resources <ul style="list-style-type: none"> - Historic Overview - Literature Review - Resource Inventory - Areas of Concern - Mapping - Compliance Procedures <ul style="list-style-type: none"> - Issues - Preservation and Mitigation Strategies <ul style="list-style-type: none"> - Archaeological Resources - Historic Resources - Other Cultural Resources - Consultation Procedures - Standard Operating Procedures - Attachments.) <p>(NOTE: This was originally checklist item number CR.4.2. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the contingency CRMP describes:</p> <ul style="list-style-type: none"> - what cultural surveys were performed - contingency plans for undiscovered archaeological resources - structures whose historic significance will become clearer through future

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>CR.1.10. Installations are required to establish a cultural resources management and inventory database to track program progress (AFI 32-7065, para 8.1) [Moved April 1999].</p>	<p>evaluations.</p> <p>Verify that the installation has established and is maintaining a cultural resources management and inventory database using the Planning Module of WIMS-ES.</p> <p>(NOTE: This was originally checklist item number CR.4.3. It was moved to facilitate consistency between TEAM manuals.)</p>
<p>CR.1.11. Installations are required to maintain current maps showing the location of cultural resources (AFI 32-7065, para 8.2) [Moved April 1999].</p>	<p>Verify that current maps with a scale of 1 in. = 400 ft are maintained with the locations of all current cultural resources assets.</p> <p>Verify that maps are reviewed and updated annually</p> <p>(NOTE: This was originally checklist item number CR.4.4. It was moved to facilitate consistency between TEAM manuals.)</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
CR.2 MISSING CHECKLIST ITEMS CR.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>CR.4</p> <p>MISCELLANEOUS CHECKLIST ITEMS</p> <p>CR.4.1. Checklist item moved [Moved April 1999].</p> <p>CR.4.2. Checklist item moved [Moved April 1999].</p> <p>CR.4.3. Checklist item moved [Moved April 1999].</p> <p>CR.4.4. Checklist item moved [Moved April 1999].</p>	<p>(NOTE: This was moved to checklist item number CR.1.8. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number CR.1.9. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number CR.1.10. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number CR.1.11. It was moved to facilitate consistency between TEAM manuals.)</p>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>CR.5</p> <p>HISTORIC PROPERTIES</p> <p>CR.5.1. Installations are required to protect historic properties through specific activities (AFI 32-7065, para 2.4.1 and para 2.5.4)</p>	<p>Verify that the installation:</p> <ul style="list-style-type: none"> - avoids adverse effects from Air Force undertakings - maintains and prevents deterioration of structures - illustrates, photographs, or otherwise establishes a historical record in accordance with Department of Interior (DOI) standards for structures that must be significantly altered or destroyed - limits public access to prevent destruction or other harm to historic properties and sites - implement education and public awareness programs - uses the guidelines for rehabilitating and maintaining historic properties published by the SOI.

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
CR.15 ARCHAEOLOGICAL/ INDIAN SITES <p>CR.15.1. Installations are required to conduct field surveys according to the SOI's <i>Standards for Identification</i> (AFI 32-7065, para 2.3.2).</p> <p>Verify that, once a cultural resource has been identified and determined eligible, nomination for listing in the Register occurs within 24 mo.</p> <p>Verify that results of the surveys are incorporated into the CRMP and forwarded to the SHPO.</p> <p>Verify that the inventory information is added to the existing installation inventory database.</p> <p>CR.15.2. Installations are required to protect cultural resources through specific activities (AFI 32-7065, para 2.4.1 and para 2.5.4).</p> <p>Verify that the installation:</p> <ul style="list-style-type: none"> - avoids adverse effects from Air Force undertakings - recovers data of archaeological significance - limits public access to prevent destruction or other harm to historic properties and sites - limits publication of the location of archaeological sites - implement education and public awareness programs. <p>CR.15.3. When an archaeological find is made during construction activities, the installation is required to notify the FPO, HQ USAFE/CE in addition to notifications required under Federal law (AFI 32-7065, para 2.8.2).</p> <p>Verify that, when an archaeological resource is located during construction activities, the installation notifies the FPO, HQ USAFE/CE.</p>	

Appendix 2-2

Programming and Budgeting Priorities for Conservation Programs (DODI 4715.3, Enclosure 4)

A. Class 0: Recurring Cultural Resources Conservation Management Requirements.

Includes activities needed to cover the recurring administrative, personnel, and other costs associated with managing DOD's conservation program that are necessary to meet applicable compliance requirements (Federal and state laws, regulations, Presidential EOs, and DOD policies) or which are in direct support of the military mission. Also included are environmental management activities associated with the operation of facilities, installations, and deployed weapons systems. Recurring costs consist of manpower, training, supplies, hazardous waste disposal, operating recycling activities, permits, fees, testing and monitoring and/or sampling and analysis, reporting and recordkeeping, maintenance of environmental conservation equipment, and compliance self assessments.

B. Class I: Current Compliance.

Includes projects and activities needed because an installation is currently out of compliance (has received an enforcement action from a duly authorized Federal or State agency, or local authority); has signed compliance agreement or has received a consent order; has not met requirements based on applicable Federal or State laws, regulations, standards, Presidential EOs, or DOD policies; and/ or are immediate and essential to maintain operating integrity or sustain readiness of the military mission. "Class I" also includes projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable laws, regulations, standards, DOD policies, or Presidential EOs, but deadlines have not passed or requirements are not in force) but shall be if projects or activities are not implemented in the current program year. These activities include the following:

1. Environmental analyses for cultural resource conservation projects, and monitoring and studies required to assess and mitigate potential impacts of the military mission on conservation resources.
2. Planning (e.g., 42 USC 434) (documentation, master plans, and integrated cultural resource management plans, etc.).
3. Baseline inventories of cultural inventories.
4. Inventories and surveys of historical and archaeological sites critical for the protection of cultural resources so that continuing actions can be modified in consultation with the Advisory Council for Historic Preservation.
5. Mitigation to meet existing regulatory permit conditions or written agreements.
6. Efforts to achieve compliance with requirements that have deadlines that have already passed, as cited in DOD executed agreements, such as support for the Chesapeake Bay Agreement Action Plan and the DOD Mojave Desert Ecosystem Management Initiative.
7. Initial curation of archaeological materials as required under 32 CFR 22 and 229, Section 470 aa-11 of 16 USC, and 36 CFR 78 and 79.
8. Consultation with Native American groups, if reinterment of Native American remains is part of their wishes.

C. Class II: Maintenance Requirements.

Includes those projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable laws, regulations, standards, Presidential EOs, or DOD policies but deadlines have not passed or requirements are not in force), but shall be out of compliance if projects or activities are not implemented in time to meet an established deadline beyond the current program year. Examples include the following:

1. Compliance with future requirements that have deadlines.
2. Conservation and Geographic Information System mapping in order to be in compliance with Federal, State, and local regulations, Presidential EOs, and DOD policy.
3. Public education programs that educate the public on the importance of protecting archaeological resources.

D. Class III: Enhancement Actions Beyond Compliance.

Includes those projects and activities that enhance conservation resources or the integrity of the installation mission, or are needed to address overall environmental goals and objectives, but are not specifically required under regulation or EO and are not of an immediate nature. Examples include the following:

1. Community outreach activities, such as "Earth Day" and "Historic Preservation Week" activities.
2. Educational and public awareness projects, such as interpretive displays, oral histories, "watchable wildlife" areas, nature trails, wildlife checklists, and conservation teaching materials.
3. Restoration or enhancement of cultural resources when no specific compliance requirements dictate a course or timing of action.
4. Reinterment of Native American remains on land managed or controlled by the DOD.
5. Management and execution of volunteer and partnership programs.

Appendix 2-3

Conservation Measures of Merit (DODI 4715.3, Enclosure 5)

A. Preparation of CRMPs (Number of Installations).

1. Requiring plans.
2. With up-to-date, approved plans.
3. Where an existing plan needs to be updated.
4. Where a plan is appropriate or needed, but does not exist.
5. Where a plan is not needed.

B. Completion of Planning Level Survey and Inventory of Cultural Resources (Number of Installations).

1. With completed historic building inventories.
2. With partial historic buildings inventories.
3. Without historic building inventories, but needed.
4. Historic building inventories not needed.
5. With completed archaeological inventories.
6. With partial archaeological inventories, but needed.
7. Without archaeological inventories, but needed.
8. Archaeological inventories are not needed.

C. Archaeological Resources Compliance (Number of Installations).

1. With archaeological collections.
2. With collections curated in accordance with DODD 4165.61.
3. Where professional curation actions are needed.
4. With known archaeological sites.
5. With site protection procedures in effect.
6. Where site protection procedures are needed.

SECTION 3

HAZARDOUS MATERIALS MANAGEMENT

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A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 32-4002, *Hazardous Material Emergency Planning and Response Compliance*. This instruction, dated 1 December 1997, helps users plan for and respond to Federal, state, local, and Department of Defense (DOD) emergencies involving hazardous material (HAZMAT) [Revised December 1997].
- Air Force Manual (AFM) 67-1, *Storage and Related Operations*. This manual requires the installation to have a comprehensive list of all chemicals used or generated on the installation.

B. Department of Defense (DOD) Directives and Instructions

- DOD Regulation (DODR) 4145-19-1, *Storage and Materials Handling*. Chapter 5, Section 4, Hazardous Commodities, dated September 1979, addresses the storage and handling of compressed gases and other hazardous commodities. There are now two additional sections, R-1 Storage and Material Handling (also known as AFMAN 23-210) and Army Tech Manual 38-400. The Army was supposed to distribute R-1, but the majority of the R-1 copies are sitting at U.S. Army Publication Distribution Center, 1655 Woodson Rd, St. Louis, MO 63114-6181 (DSN 693-1110). R-2, Storage of HazMat. is currently under rewrite with no known release date. Once R-2 is rewritten and distributed, OSD plans to reclaim the executive agent role for 4145.
- DOD Instruction (DODI) 4715.6, *Environmental Compliance*. This instruction, dated 24 April 1996, implements policy, assigns responsibility, and prescribes procedures for achieving compliance with applicable Executive Orders (EO) and Federal, state, interstate, regional, and local statutory and regulatory environmental requirements. This DODI does not apply to the operations of U.S. military aircraft or to off-installation operational and training deployments.

C. Using TEAM Guide for ECAMP

- Meet with the Bioenvironmental Engineer to review assignment of IEX codes.
- Meet with MPH for discussion of the installation hazard communication program.
- Visit the following types of activities to assess storage in flammables cabinets, labeling, outdoor storage, etc.: shops, photo labs (including AAFES), dry cleaners, craft/hobby shops, hobby shop, school chemistry and biology labs, hospitals, veterinarians, dentists, mortuaries, security police, and storage areas for MWR activities such as the aero club, Boy and/or Girl Scouts, etc.
- Review the Pharmacy request and distribution system, identify who still remains outside of the loop.

D. Key Air Force/DOD Compliance Requirements

- Planning and Documentation - Installations are required to maintain a master listing of HAZMAT storage sites. When the facility needs outside fire protection help, it should tell the local fire department the types of hazardous chemicals it uses, the areas where it uses them, what it uses them for, and the amount it uses. They are also required to have a written HAZMAT Plan.

- Hazardous Materials Storage - Installations may not allow the storage of non-DOD owned toxic or hazardous materials onsite.
- Training - Military and civilian personnel with HAZMAT emergency response roles are required to be trained.
- Spill Response - Major installations are required to have a HAZMAT response team and each installation is required to have a HAZMAT post-emergency response team or capability.
- Compressed Gas Storage - The storage of compressed gas is required to be done in structures that meet specific parameters depending on whether it is an open-sided or three-sided structure.

E. Key Compliance Personnel

- Base Civil Engineering (BCE)/Environmental Management (EM). The BCE is responsible for the storage and handling of all HAZMAT used by the civil engineering shops in properly designated facilities. The BCE is also responsible for reporting releases of reportable quantities of hazardous substance to the National Response Center (NRC) and/or U.S. Environmental Protection Agency (USEPA) and appropriate state authorities.
- The Director of Base Medical Services. The Director of Base Medical Services, through the Bioenvironmental Engineering (BEE) Section, is responsible for reviewing potential hazardous commodities referred by installation supply and directing the assignment of the appropriate issue exception code (IEX), IRMC, or health hazard flag (HHF). The BEE maintains material safety data sheets (MSDSs) for all items used on the installation.
- Installation Fire Department. The Installation Fire Department provides support in emergency response spill events, exercises, and fire protection activities. In addition, the department is responsible for making periodic fire safety inspections of flammable/combustible storage and handling areas on the installation.
- Installation Supply (LGS). LGS has primary responsibility to receive, store, and issue all hazardous items ordered through the Standard Base Supply System (SBSS). LGS identifies inspected hazardous commodities by referencing the most current version of Federal Standard 313 and DODR 4145.19-1 and refers these commodities to the BEE Section for determination of the specific health hazard. LGS ensures the receipt of receiving documents and coordinates with the BEE to ensure their receipt of the MSDS. LGS ensures the proper maintenance and operation of flammable or combustible materials storage facilities, acid storage facilities, and compressed gas storage facilities. LGS ensures that all issues of HAZMAT are properly labeled.
- Installation Chief of Safety. The Installation Chief of Safety is responsible for ensuring workplace occupational and environmental safety and health inspections and program evaluations are conducted. When discrepancies are discovered in the handling and storage of hazardous materials, the findings and recommended corrective actions will be noted in the report and forwarded to the appropriate manager and the hazardous materials program manager. The installation safety staff is responsible for participating in the investigation of all hazardous materials mishaps and reporting those which result in injury or property damage.
- Hazardous Materials Pharmacy. When applicable, the Hazardous Materials Pharmacy is responsible for requisitioning, receiving, dispensing, issuing and storing HAZMAT for their customer organizations. The pharmacy manager is responsible for the maintenance of the compatible storage, spill containment, venting, and dispensation systems within the facility. The pharmacy is also responsible for receiving MSDSs and providing them to the HAZMAT user. The pharmacy manager shall ensure all pharmacy personnel are trained in the use, handling, and transportation of HAZMAT.

F. Key Air Force/DOD Compliance Definitions

- *Disaster Control Group* - the disaster response force element that goes to the scene of a major accident or natural disaster to provide command and control under the direction of the on-scene commander (AFI 32-4002, Attachment 1).
- *Follow-On Element* - the nonemergency response elements of a disaster response force that deploy to the accident scene after the initial response element to expand command and control and perform support functions (AFI 32-4002, Attachment 1).
- *Hazardous Material (HAZMAT)* - all hazardous substances, petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals including hazardous wastes (AFI 32-4002, Attachment 1).
- *Incident Commander (IC)* - the senior fire official (SFO) responsible for command and control at the immediate HAZMAT incident site (hot and warm zones)(AFI 32-4002, Attachment 1) **[Revised December 1997]**.
- *Major Installation* - in the Air Force, a self-supporting center of operations for actions of importance to Air Force combat, combat support, or training. It is operated by an active, reserve, or guard unit of group size or larger with all land, facilities, and organic support needed to accomplish the unit mission. It must have real property accountability through ownership, lease, permit, or other written agreement for all real estate and facilities. Shared use agreements do not met the criteria to be a major installation (AFI 32-4002, Attachment 1) **[Revised December 1997]**.

G. Additional Records To Review

- Emergency plan documents
- Shipping papers and manifests

H. Additional Physical Features To Inspect

- Shop activities
- Shipping and receiving area

I. People To Interview

- Base Civil Engineer
- Base Disaster Preparedness Officer (BDPO)
- Installation Fire Department
- Base Supply
- Bioenvironmental Engineer
- Safety Officer
- Transportation Officer
- Installation Ground Safety Manager
- DRMO
- Environmental Management

J. Guidance for Air Force Supplement Hazardous Materials Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	HM.1.1 through HM.1.8
Missing Checklist Items	HM.2.1
Personnel Training	HM.10.1
Releases of Hazardous Materials	HM.20.1
Emergency Planning	HM.25.1 through HM.25.6
Flammable/Combustible Liquids Storage General	HM.35.1 and HM.35.2
Compressed Gases Storage	HM.45.1 and HM.45.2
Hazardous Materials Transportation	HM.50.1

Appendix 3-1, *Recommended HAZMAT Plan Format.*

Appendix 3-2, *HAZMAT Emergency Response Minimum Training Requirements.*

Appendix 3-3, *Quantities of Hazardous Materials That the HAZMAT Planning Team Identifies and Evaluates.*

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HM.1	
ALL INSTALLATIONS	
<p>HM.1.1. Copies of all relevant Federal, state, and local regulations on hazardous materials management should be maintained at the installation (MP) [Revised July 1999].</p>	<p>Verify that the following documents are maintained and kept current at the Installation:</p> <ul style="list-style-type: none"> - EO 12088, <i>Federal Compliance with Pollution Standards</i>. - 29 CFR 1910, <i>Occupational Safety and Health Standards</i>. - 40 CFR 112, <i>Oil Pollution Prevention</i>. - 40 CFR 300, <i>National Oil and Hazardous Substances Pollution Contingency Plan</i>. - 40 CFR 302, <i>Reportable Quantities of Hazardous Materials (Table 302.4)</i>. - 40 CFR 355, <i>Emergency Planning and Notification</i>. - 40 CFR 370, <i>Hazardous Chemical Reporting: Community Right-To-Know</i>. - 40 CFR 372, <i>Toxic Chemical Release Reporting: Community Right-To-Know</i>. - 49 CFR 171, <i>General Information, Regulations, and Definitions</i>. - 49 CFR 172, <i>Hazardous Materials Tables, Special Provisions, Hazardous Materials Communication Requirements and Emergency Response Information Requirements</i>. - 49 CFR 173, <i>Shippers, - General Requirements for Shipments and Packaging</i>. - DODR 4145.19-1, Chapter 5, Section 4, <i>Hazardous Commodities</i>. - DODI 4715.6, <i>Environmental Compliance</i>. - AFI 32-4002, <i>Hazardous Material Emergency Planning and Response Compliance</i>. - AFM 67-1, Vol. 2, Part Two, Chapter 14, <i>Storage and Related Operations</i>. - AFM 67-1, Vol. 2, Part Two, Chapter 21, <i>Special Logistic Support Procedures</i>. - International Civil Aviation Organization, <i>Technical Instructions for the Safe Transport of Dangerous Goods by Air</i>. - International Maritime Organization, <i>International Maritime Dangerous Goods Code</i>. - NFPA, <i>Fire Protection Guide of Hazardous Materials</i>. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local laws that may affect ongoing and proposed activities and keeps the Environmental Protection Committee (EPC) informed as needed.</p>
<p>HM.1.2. The installation is required to have a comprehensive list of all chemicals used or generated on the installation and an</p>	<p>Verify that a comprehensive list has been generated and the hazards assessed.</p> <p>(NOTE: Hazardous constituents of expired materials discovered during the inventory process, or at any other time, should be identified prior to disposal, (see</p>

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<p>assessment of their hazards (AFM 67-1, Volume 2, part two, Chapter 14 and 21).</p> <p>HM.1.3. The installation should coordinate with the fire department concerning the types of hazardous chemicals used at the installation, the areas where they are used, what they are used for, and the quantities used in a given operation (MP).</p> <p>HM.1.4. Each installation is required to publish a HAZMAT Plan and a HAZMAT Appendix to Annex A to O Plan 32-1 (AFI 32-4002, para 3.3) [Revised December 1997].</p>	<p>appropriate checklist items in the Section 4, Hazardous Waste Management).)</p> <p>Verify that the fire department is aware of areas that are at high risk for chemical incidents.</p> <p>Verify that the HAZMAT Plan and HAZMAT Appendix provide guidance to installation personnel on local procedures for handling of known and unknown HAZMAT.</p> <p>Verify that the plan or appendix:</p> <ul style="list-style-type: none"> - includes emergency action plan requirements contained in 29 CFR 1910.38(a) for post-emergency cleanup operations - identifies the total resources needed (personnel and equipment) to remove, to the maximum extent practicable, a worst-case HAZMAT release (including releases resulting from fire or explosion) - identifies the resources necessary to reduce or prevent the substantial threat of a worst-case release - identifies the qualified individual having full authority to oversee the removal of HAZMAT from a contaminated site - is consistent with offsite plans such as the Federal Response Plan, the Regional Response Plan, the National Contingency Plan, the Regional Contingency Plans, and area and local contingency plans. <p>Verify that the HAZMAT Plan and HAZMAT Appendix are reviewed and approved by the EPC at least annually.</p> <p>Verify that a professional engineer certifies the HAZMAT Plan at least every 3 yr and/or every time major changes occur which require the plan to be updated.</p> <p>Verify that the installation has sent a copy of the current plan to the appropriate local and state emergency planning committees and to other non-Air Force agencies or organizations as necessary.</p> <p>(NOTE: See Appendix 3-1 for a list of the recommended contents.)</p>

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<p>HM.1.5. In specific circumstances installations are required to have a copy of the AF Multi-Product Emergency Response Plan (AFI 32-4002, para 3.4) [Revised December 1997].</p> <p>HM.1.6. Installations may not allow the storage of non-DOD owned toxic or HAZMAT onsite (DODI 4715.6, para 4.10) [Revised July 1999].</p>	<p>Verify that AF installations along predetermined routes for the commercial shipment of liquid dinitrogen tetroxide have a copy of this plan.</p> <p>Verify that the installation does not allow the storage of non-DOD owned toxic or HAZMAT onsite.</p> <p>(NOTE: This does not apply to:</p> <ul style="list-style-type: none"> - the storage, treatment, or disposal of materials that will be or have been used in connection with an activity of the DOD or in connection with a service to be performed on a DOD installation for the benefit of the DOD - the storage of strategic and critical materials in the National Defense Stockpile under an agreement for such storage with the Administrator of General Services - the temporary storage or disposal of explosives in order to protect the public or to assist agencies responsible for Federal, State, or local law enforcement in storing or disposing of explosives when no alternative solution is available, if such storage or disposal is made in accordance with an agreement between the Secretary of Defense and the head of the Federal, State, or local agency concerned - the temporary storage or disposal of explosives in order to provide emergency lifesaving assistance to civil authorities - the disposal of excess explosives produced under a DOD contract, if the head of the military department concerned determines, in each case, that an alternative feasible means of disposal is not available to the contractor, taking into consideration public safety, available resources of the contractor, and national defense production requirements - the temporary storage of nuclear materials or nonnuclear classified materials in accordance with an agreement with the Secretary of Energy - the storage of materials that constitute military resources intended to be used during peacetime civil emergencies in accordance with applicable DOD regulations - the temporary storage of materials of other Federal agencies in order to provide assistance and refuge for commercial carriers of such material during a transportation emergency - the storage of any material that is not owned by the DOD if the Secretary of the military department concerned determines that the material is required or generated in connection with the authorized and compatible use of a facility of the Department of Defense, including the use of such a facility for testing material or training personnel - the treatment and disposal of any material that is not owned by the DOD if the Secretary of the military department concerned determines that the

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<p>HM.1.7. Specific persons should be designated responsible for HAZMAT storage areas and the precise nature of their responsibilities should be specified (MP).</p> <p>HM.1.8. Installations are required to perform specific risk management activities relating to HAZMAT (AFI 32-4002, para 3.2.3) [Revised December 1997].</p>	<p>material is required or generated in connection with the authorized and compatible use of a facility of that military department and the Secretary enters into a contract or agreement with the prospective user that:</p> <ul style="list-style-type: none"> -is consistent with the best interest of national defense and environmental security -provides for the prospective user's continued financial and environmental responsibility and liability with regard to the material -the storage of any material that is not owned by the DOD if the Secretary of the military department concerned determines that the material is required or generated in connection with the use of a space launch facility located on an installation of the DOD or on other land controlled by the U.S.) <p>Verify that specific individuals have been designated responsible for HAZMAT storage areas.</p> <p>Verify that the individuals designated responsible for HAZMAT storage areas are aware of the precise nature of their responsibilities.</p> <p>Verify that the installation is effective in its use of resources to control the total HAZMAT problem (as identified by hazard analysis) on the installation.</p> <p>(NOTE: Risk management includes the acceptance of a specific level of unprotected risk which can be reduced only through a combination of preventive activities and capability enhancement.)</p>

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HM.2 MISSING CHECKLIST ITEMS HM.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this check list (A finding under this checklist item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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<p>HM.10</p> <p>PERSONNEL TRAINING</p> <p>HM.10.1. Military and civilian personnel with HAZMAT emergency response roles are required to be trained (AFI 32-4002, para 4-5) [Citation Revised December 1997].</p>	<p>Verify that, prior to taking part in a HAZMAT incident response, personnel are trained as indicated in Appendix 3-2.</p>

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<p>HM.20</p> <p>RELEASES OF HAZARDOUS MATERIALS</p> <p>HM.20.1. Environmental release notification within the Air Force is required to be done according to specific parameters [Added December 1997].</p>	<p>Verify that appropriate MAJCOM and HQ USAF/ILEV/ILEQ are notified of any release that meets one or more of the following criteria:</p> <ul style="list-style-type: none"> - results in an injury or loss of life - results in the loss of an aircraft or a facility - causes interruption of flying operations - causes environmental contamination extending beyond installation boundaries - creates financial impact exceeding \$50,000 - may result in litigation, publicity, or media coverage - other reasons as specified by the local commander. <p>Verify that follow-up reports are provided as the situation merits.</p> <p>Verify that environmental releases are submitted using the Air Force Operational Reporting System, Operational Status Reports (OPREP-3).</p>

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<p>HM.25</p> <p>EMERGENCY PLANNING</p> <p>HM.25.1. Each installation is required to have a HAZMAT planning team (AFI 32-4002, para 3.1) [Revised December 1997].</p> <p>HM.25.2. Major installations are required to have a HAZMAT response team or a HAZMAT response capability (AFI 32-4002, para 4.1 and 4.2) [Revised December 1997].</p>	<p>Verify that the installation has the HAZMAT planning team and the installation's HAZMAT program manager direct the planning team.</p> <p>(NOTE: The Installation Civil Engineering Readiness Flight Chief normally serves as the HAZMAT program manager but the Installation Commander may choose another individual to serve as program manager.)</p> <p>Verify that the name of the program manager is provided to local emergency response organizations.</p> <p>(NOTE: Installations are exempt from the response requirements if they comply with the following:</p> <ul style="list-style-type: none"> - evacuate their personnel from the danger area when an emergency occurs - do not permit any of their personnel to assist in the emergency response - prepare a local emergency action plan that delineates who is responsible for the HAZMAT incident response.) <p>Verify that the fire department forms the core of the HAZMAT response team.</p> <p>(NOTE: The HAZMAT emergency response capability should not differ from Initial Response Element (IRE) and the Follow On Element (FOE) listed in AFI 32-4001 and AFMAN 32-4004.)</p> <p>Verify that the installation has identified the specific roles and responsibilities of each organization that responds to a HAZMAT incident.</p> <p>Verify that the team is able to effectively respond to and contain a HAZMAT release to prevent or reduce:</p> <ul style="list-style-type: none"> - human injury or death - property damage - product loss - environmental damage. <p>Verify that organizations causing an accidental HAZMAT release assist the installation's emergency response team to the maximum extent possible within the limits of their training.</p>
<p>HM.25.3. Each AF</p>	<p>Verify that each AF installation has a HAZMAT post-emergency response team or</p>

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<p>installation is required to have a HAZMAT post- emergency response team or capability (AFI 32-4002, para 4.3 and 4.4) [Revised December 1997].</p> <p>HM.25.4. The installation HAZMAT planning team is required to conduct hazard analyses to identify the specific hazards that a HAZMAT release might bring to an installation and local community (AFI 32- 4002, para 3.2.1) [Revised December 1997].</p> <p>HM.25.5. Installations are required to conduct a capability assessment in relation to emergency planning (AFI 32-4002, para 3.2.2) [Revised December 1997].</p> <p>HM.25.6. Checklist item deleted [Deleted December 1997].</p>	<p>capability.</p> <p>(NOTE: If the installation decides to contract all cleanup operations, they only need an advisory group.)</p> <p>Verify that all incidents that required a disaster control group response have a post-incident review and critique to evaluate the HAZMAT plan's effectiveness and to identify deficiencies.</p> <p>Verify that hazard analyses are done and include:</p> <ul style="list-style-type: none"> - hazard identification - risk analysis - risk vulnerability. <p>Verify that the EPC reviews the data to prevent duplication, maximize data collection, and enhance pollution prevention efforts.</p> <p>Verify that the installation has done a capability assessment that assesses personnel, training, funding, information sources, command and control, the management, evacuation, personal protective equipment, monitoring, release control and containment, decontamination, laboratory support, clean up, recovery, and local community resources.</p> <p>Verify that local community resources, including commercial resources available to supplement installation deficiencies, have been identified.</p> <p>Verify that identified HAZMAT capability deficiencies are tracked until a corrective action is implemented.</p> <p>This checklist item was deleted due to the revision of AFI 32-4002.</p>

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<p>FLAMMABLE/ COMBUSTIBLE LIQUIDS STORAGE</p> <p>HM.35 General</p> <p>HM.35.1. Specific good management practices should be considered when storing and handling flammable/combustible materials (MP).</p> <p>HM.35.2. Storage cabinets used for the storage of flammable/combustible liquids should meet specific requirements (MP).</p>	<p>Verify that the following good management practices are followed:</p> <ul style="list-style-type: none"> - there are no positive sources of ignition (open flames, welding, radial heat, mechanical sparks) in the immediate area - items are not stored against pipes or coils producing heat - paint drums that are stored horizontally are rolled a half turn every 90 days - containers of paint are palletized prior to storage - aerosol containers are stored in well-ventilated areas. <p>Verify that containers are stored and handled such that:</p> <ul style="list-style-type: none"> - open flame devices are not in use in the storage area - combustible materials, other than wood pallets used in the storage of flammable/combustibles, are not stored in the storage facility - handling is done so as to avoid damaging the label - materials received without a date of manufacture label are marked with the shipping document date - leaking containers are removed from the storage area immediately - containers are stored so that they are issued or used in the order of dates of manufacture, with the oldest material being used first - there are no open containers. <p>Verify that storage cabinets meet the following:</p> <ul style="list-style-type: none"> - materials within the cabinet are segregated - there are no open containers within the cabinet - all containers in the cabinet are labeled.

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
HM.45 COMPRESSED GASES STORAGE HM.45.1. Bulk storage of compressed gas is required to meet specific requirements (DODR 4145.19-1, para 5-405d (1) and 5-405d(2)).	<p>Verify that the storage of compressed gases in open-sided, roofed sheds meets the following criteria:</p> <ul style="list-style-type: none"> - shed is on concrete slab above grade - shed is located in secured area - shed is separated from other buildings by at least 50 ft - flammable gases and gases that support combustion are stored in different sheds separated by at least 50 ft - if the shed has one or more sides, provisions are made to ensure complete change of air at least six times per hour - shed is not heated - if necessary, stationary or rotating roof vents are used to lower temperature near the ceiling to ambient conditions during warm weather - cylinders and portable tanks have pressure relief devices installed. <p>Verify that, if compressed gases are stored in an enclosed storage facility, the following criteria are met:</p> <ul style="list-style-type: none"> - the building is one story in height, preferably of noncombustible construction - separate storage compartments or rooms are available for flammable gases or gases that support combustion - at least one wall of each storage room or compartment for combustible gases is an exterior wall - every storage room or compartment is provided with either a gravity or mechanical exhaust ventilation system designed to provide complete change of air at least six times per hour - the building is not heated.
HM.45.2. Compressed gases are required to be handled according to specific procedures and practices (DODR 4145.19-1, paras 5-405c(6) through 5-405c(9), 5-405c(14), and 5-405c(22)).	<p>Verify that the following practices and procedures are followed:</p> <ul style="list-style-type: none"> - oxygen cylinders are free from grease or oil - numbers or markings that are stamped on the cylinders are not altered or defaced - additional markings are not applied to cylinders without approval - empty cylinders are stored separately but in the same manner as full cylinders - valves on empty cylinders are closed - NO SMOKING signs are posted in and around compressed gas storage sheds.

COMPLIANCE CATEGORY: HAZARDOUS MATERIALS MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
HM.50 HAZARDOUS MATERIALS TRANSPORTATION HM.50.1. The installation should ensure that transportation of HAZMAT between buildings is accomplished in accordance with good management practices to help ensure against spills, releases, and accidents (MP).	<p>Determine if procedures exist to manage movement of HAZMAT throughout the installation.</p> <p>Determine if drivers are trained in spill control procedures.</p> <p>Determine if provisions have been made for securing HAZMAT in vehicles when transporting.</p>

Appendix 3-1

Recommended HAZMAT Plan Format (AFI 32-4002, Attachment 3) [Revised December 1997]

1. Introduction
a. Emergency Action Plan
b. Telephone Roster
c. Mission Statement
d. Legal Authority and Responsibility for Responding
e. Abbreviations and Definitions
f. Assumptions/Environmental Setting
g. Concept of Operations
1. Governing Principles
2. Organizational Roles and Responsibilities
3. Relationship to Other Plans
h. Instruction on Plan Use
1. Purpose
2. Plan Distribution
i. Record of Amendments
2. Hazards Analysis
a. Hazards Identification
b. Vulnerability Analysis
c. Risk Analysis
3. Capability Assessment
a. Base Research
b. Offbase Research
4. Response Functions
a. Initial Notification of Response Agencies
b. Direction and Control
c. Communication (among responders)
d. Warning systems and Emergency Public Notification
e. Public Information/Community Relations
f. Resource Management (including training)
g. Medical Support
h. Environmental Management
i. Decontamination Procedures
j. Personal Protection of Citizens
1. Indoor Protection
2. Evacuation Procedures
3. Other Public Protection Strategies
k. Fire and Rescue Support
l. Security Police Support
m. Civil Engineering Support
n. Other Support Services
5. Containment and Cleanup
6. Documentation and Investigative Followup
7. Procedures for Testing and Updating the Plan
8. References

Recommended O Plan 32-1 Appendix Format	
1. Purpose	
2. Assumptions (Summary of Hazards Analysis)	
a. Vulnerable Facilities	
b. Pre-Emergency Planning	
3. Concept of Operations	
a. Relationship of O Plan to HAZMAT Plan	
b. Roles and Responsibilities	
c. Federal, State, and Local Relationship	
4. Emergency Response Phase	
a. Notification Procedures	
c. Site Management Practices	
d. Evacuation Procedures	
5. Recovery Phase	
a. After Action Reports	
b. Incident Review and Followup	

Appendix 3-2

HAZMAT Emergency Response Minimum Training Requirements (AFI 32-4002, Table 4.1) [Revised December 1997]

Employee Category	Training Categories				
	1	2	3	4	5
Designated OSC and Alternates	X			X	
Base Civil Engineer	X			O	
Senior Fire Officials	X	X		X	X
HAZMAT Emergency Response Team (Note 1)	X	X	X		
Fire Protection Personnel	X	X			
CE Readiness	X	O	O		O
Explosive Ordnance Disposal	X	O	O		
Medical Personnel (Note 2)	X	X			
Security Police	X				
X designates mandatory training O designates optional training					

Training Categories:

1. First Responder Awareness (29 CFR 1910.120 and NFPA 472). Typically 10 - 12 h.
2. First Responder Operations (29 CFR 1910.120 and NFPA 472)
3. First Responder Technician (29 CFR 1910.120 and NFPA 472)
4. OSC (MLMDC 81 or associated mobile training team located at Maxwell AFB, AL).
5. First Responder Incident Commander (29 CFR 1910.120 and NFPA 472).

Note 1: Based on an installation's hazards analysis, HAZMAT Emergency Response Team members may not require technician level training. This is true in instance where the installation only has a HAZMAT Operations level mission or chooses to have outside help to control the HAZMAT incident.

Note 2: As a minimum, personnel that respond directly to HAZMAT incidents to provide care to the injured require First Responder Awareness level training and DoD certification (i.e., ambulance personnel, flight medicine doctors). This also includes medical personnel that provide treatment to contaminated victims from a HAZMAT incident. Additionally, medical emergency response personnel who must enter the hot or warm zone of a HAZMAT incident also require First Responder Operations Level training and DoD certification. Normally, emergency medical care in the hot and warm zone is provided by the fire department. In this instance, First Responder Operations level training and DoD certification would not be required.

Appendix 3-3

**Quantities of Hazardous Materials That the HAZMAT Planning
Team Identifies and Evaluates
(AFI 32-4002, Table 2.1)**

Category	Screening Quantity
Extremely Hazardous Substances (EHSs)	Greater than or equal to the threshold planning quantity (TPQ). (The sum of all containers of a specific EHS, no matter where they are located on an installation).
Hazardous Substance	Containers greater than or equal to 55 gal.
Underground Storage Tanks (USTs)	Tanks containing more than 42,000 gal of oil.
Aboveground Storage Tanks (ASTs)	Tanks containing more than 1320 gal or any container with a capacity in excess of 660 gal of oil.
Hazardous Waste	Any amount.
PCBs	Any quantity of a material containing a concentration of greater than or equal to 50 ppm.

SECTION 4

HAZARDOUS WASTE MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 32-7042, *Solid and Hazardous Waste Compliance*. This AFI, dated 12 May 1994, contains requirements for hazardous waste management planning, training, collecting, and disposal.
- Air Force Policy Letter, 6 June 1991. The letter, *AF Hazardous Waste Management Policy*, provides guidance on the management of hazardous waste, employee training, turn-in and disposal procedures, contracting, and pollution prevention [Revised December 1997].
- Air Force Policy Letter, 21 January 1994. This letter, *Air Force Policy on the Application of the Resources Conservation and Recovery Act to Conventional Explosive Ordnance Operations*, addresses the issue of when waste ordnance is to be handled as a hazardous waste.
- Air Force Pamphlet (AFPAM) 32-7043, *Hazardous Waste Management Guide*. This AFPAM, dated 1 November 1995, provides guidance for managing hazardous waste at Air Force installations to meet standards in the United States.

B. Department of Defense (DOD) Directives and Instructions

- DOD Instruction (DODI) 4715.6, *Environmental Compliance*. This instruction, dated 24 April 1996, implements policy, assigns responsibility, and prescribes procedures for achieving compliance with applicable Executive Orders (EOs) and Federal, state, interstate, regional, and local statutory and regulatory environmental requirements. This DODI also designated the DOD Executive Agents to lead DOD implementation of key environmental issues. This DODI does not apply to the operations of U.S. military aircraft or to off-installation operational and training deployments. The Executive Agent for low-level radioactive waste disposal and implementation of RCRA is the Army.

C. Using the TEAM Guide for ECAMP

- Review the Hazardous Waste Management Plan and any permits.
- Meet with the Bioenvironmental Engineer to discuss sampling of unknowns.
- Meet with Hazardous Waste Program Manager for discussion of the overall program and to obtain a list of accumulation points.
- Visit the accumulation points to ensure proper training, documentation, and storage,
- Visit the following types of activities, to assess if hazardous waste is being generated: photo labs (including AAFES), dry cleaners, craft/hobby shops, hobby shop, school chemistry and biology labs, hospitals, veterinarians, dentists, mortuaries, security police, and storage areas for MWR activities such as the aero club. If it is, determine if it is being managed correctly:
- If there is a DRMO onsite, visit it to ensure standards for TSDFs are being met.

- If possible, trace the trail of a couple of individual drums of waste from where they were generated to the disposition through DRMO.
- Review the contents of the hazardous waste training offered at the installation to ensure that it is installation specific and reflect accurate standards.
- Identify if anyone from the installation transport hazardous waste off the installation, if yes, ensure they are certified.

D. Key Air Force/DOD Compliance Requirements

- Installation Hazardous Waste Management Plan. Each Installation Commander (IC) will ensure that a written hazardous waste management plan is maintained to provide personnel with procedures and responsibilities to manage hazardous wastes consistent with all applicable laws and regulations.
- Waste Characterization - Installations are required to use a waste analysis plan, a waste stream inventory, and hazardous waste profile sheets when characterizing their waste streams.
- Accumulation Point Management - Specific individuals have to be designated as responsible for an accumulation point.

E. Key Compliance Personnel

- The IC. The IC is responsible for establishing and maintaining an active program of surveillance of the users of hazardous materials; generators, transporters, and storers of hazardous wastes; the waste minimization program; and disposal activities. The IC is responsible for compliance with RCRA and state regulations involving host and tenant organizations on the installation. The IC signs all permit applications and reports submitted to the USEPA or state agencies. If the IC is not a colonel or higher, permit applications must be referred up the chain of command to an official in the grade of colonel or higher for signature. In either case, operational responsibility for the hazardous waste program rests with the activities that generate, treat, store, transport, or dispose of the waste and the activities responsible for implementing health, safety, and environmental protection programs.
- The Installation Environmental Protection Committee (EPC). The EPC is responsible for reviewing summary data on waste generation, personnel training, and disposal practices.
- The Base Civil Engineer (BCE). The BCE or designated Environmental Management Office (EMO) develops installation-specific policy for all aspects of hazardous waste management for all activities on the installation including Air Force and non-Air Force tenants. The BCE/EMO also manages the hazardous waste program, reviews all hazardous waste storage, treatment, and disposal facilities and ensures their compatibility with hazardous waste regulations, serves as the Office of Primary Responsibility (OPR) for developing and implementing the hazardous waste management plan, identifies to the contracting office those hazardous wastes that the installation elects to dispose of by local contract with the necessary conditions the contractor is required to meet, and approves siting and design of all hazardous waste management facilities.
- Installation Fire Department. This department provides support in emergency response, spill events, exercises, and fire protection activities. The department is responsible for making periodic fire safety inspections of hazardous waste storage areas and accumulation points on the installation.
- Civil Engineering Environmental Planning Function. The Environmental Planner is responsible for monitoring day-to-day hazardous waste management activities, maintaining hazardous waste files, permit applications, reports to USEPA and/or state regulatory agencies, and budgets for hazardous waste disposal, verifying that billings for hazardous waste disposal are accurate and certifying them for payment by Accounting and Finance, certifying that

all hazardous waste is properly identified, labeled, and packaged before transfer to the Defense Reutilization and Marketing Office (DRMO), assisting generating activities in preparing turn-in documentation, and establishing procedures for transfer of accountability and custody of hazardous waste from the generating activity to the DRMO.

- The Bioenvironmental Engineer (BEE). The BEE provides industrial hygiene and occupational health consultant services to all industrial shops and hazardous waste treatment, storage, and disposal facilities and monitors hazardous waste processes for worker health and safety. The BEE also provides installation technical expertise on hazardous waste identification and is the OPR for the installation hazardous waste stream inventory and waste analysis plan. At the request of the environmental manager, the BEE may collect, prepare, and transport hazardous waste samples to an approved analytical laboratory for analysis. The BEE also reviews plans to build or modify facilities used to treat, store, or dispose of hazardous wastes, reviews all material requests for issues of stock classes listed in Federal Standard 313, direct assignment of installation exception codes (IEXs) or IRMCs to all items requiring medical oversight, and maintains a master file of material safety data sheets (MSDSs).
- The Public Health Officer (PHO). The PHO verifies the Hazardous Communication training for all supervisors who have personnel who handle hazardous materials.
- The Supply Officer. The Supply Officer processes paperwork transactions and maintains the computer transaction records for all hazardous waste disposal actions. Installation Supply will not accept physical custody of hazardous waste.
- The Transportation Officer. The Transportation Officer ensures hazardous wastes are properly labeled, packaged, manifested, and transported in appropriate vehicles (contract or Air Force owned vehicles).
- The Deputy Commander for Maintenance (DCM) or Chief of Maintenance. The DCM ensures nonhazardous and nontoxic materials are used where possible, maintains a list of hazardous materials used in the work area by shop and maintenance related task, ensures personnel are properly trained in ordering, using, handling, controlling, and storing hazardous materials and wastes, and ensures hazardous waste is properly labeled.
- Hazardous Waste Generating Activities. Generating Activities manage hazardous waste in their custody including proper storage, inspection, recordkeeping, labeling of containers, and transfer for disposal. Proper transfer for disposal will include providing Installation Supply all required information to establish hazardous waste stock numbers, preparing turn-in documentation, obtaining funding certification, and transporting hazardous waste to DRMO pickup points.
- Hazardous Waste Treatment, Storage, and Disposal Facility (TSDF) Operators. Each TSDF operator is responsible for ensuring compliance with hazardous waste regulations applicable to the facility including maintaining operational and training records.
- The DRMO. This organization may or may not be located on the installation. Regardless, it is the single agency designated by DOD to provide hazardous waste disposal service on a pay-for-services-rendered basis to the installation. The DRMO is responsible for compliance with all USEPA, state, and Air Force (including installation guidance) regulations at its storage or disposal facility.
 1. In many cases, the BCE will assist the DRMO in filing the RCRA Part B application and in obtaining the required RCRA permit. The DRMO is responsible for operating the storage facility according to the RCRA regulations or permit and for arranging for the shipment off installation for disposal of the waste.
 2. In a few limited cases, the installation may own and operate a long-term storage facility. This is the case when there is not a DRMO facility on the installation and waste must be accumulated more than 90 calendar days before shipment to an off installation DRMO. Normally, the BCE assumes responsibility for operating such a long-term storage facility.

F. Key Air Force/DOD Compliance Definitions

- *Hazardous Waste Profile Sheet* - A document (Defense Reutilization and Marketing Service (DRMS) Form 1930) that describes the physical and chemical properties of hazardous waste (AFI 32-7042, Attachment 1).

G. Additional Records To Review [Revised October 1998]

- Hazardous Waste Management Plan
- Hazardous Waste Profile Sheet
- Hazardous waste inventory

H. Additional Physical Features To Inspect

- DRMOs
- Other permitted or interim permitted activities (e.g., thermal treatment units)

I. People To Interview

- Base Civil Engineering (Environmental Coordinator)
- DRMO
- Satellite Accumulation Point Managers or Operators
- Ground Safety Manager
- Fire Department
- TSDF Operators
- Project Resource Manager
- Base Bioenvironmental Engineer
- Transportation
- Accumulation Point Managers and Operators

J. Guidance for Air Force Supplement Hazardous Waste Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	HW.1.1 and HW.1.2
Missing Checklist Items	HW.2.1
All Sizes of Generators General	HW.10.1 through HW.10.7

Appendix 4-1, *Re-Evaluation Frequencies for Chemical Mixture.*

COMPLIANCE CATEGORY: HAZARDOUS WASTE MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
HW.1 ALL INSTALLATIONS HW.1.1. Copies of all relevant Federal, state, and local regulations on hazardous waste should be maintained at the installation (MP) [Revised December 1997].	<p>(NOTE: States may obtain authorization to operate the RCRA program from the USEPA, provided regulations at least as stringent as USEPA regulations have been passed and an agreement has been signed with the USEPA.)</p> <p>Determine, from interviews, if copies of the following regulations are maintained and kept current at the installation:</p> <ul style="list-style-type: none"> - 40 CFR 261, <i>Identification and Listing of Hazardous Waste.</i> - 40 CFR 262, <i>Standards Applicable to Generators of Hazardous Waste.</i> - 40 CFR 263, <i>Standards Applicable to Transporters of Hazardous Waste.</i> - 40 CFR 264, <i>Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.</i> - 40 CFR 265, <i>Interim Status Standards for Owners and Operators of Hazardous Waste Treatment Storage and Disposal Facilities.</i> - 40 CFR 266, <i>Standards for the Management of Specific Hazardous Wastes and Specific Environmental Compliance.</i> - 40 CFR 268, <i>Land Disposal Restrictions.</i> - 49 CFR 172-179, <i>Transportation Regulations.</i> - <i>Air Force Hazardous Waste Management Policy</i>, 6 June 1991. - <i>Air Force Policy on the Application of RCRA to Conventional Explosive Ordnance Operations</i>, 21 January 1994. - AFI 32-7042, <i>Solid and Hazardous Waste Compliance.</i> - Any MAJCOM Supplements to AFI 32-7042. - DODI 4715.6. <i>Environmental Compliance.</i> - National Fire Protection Association (NFPA), <i>Fire Protection Guide of Hazardous Materials.</i> - applicable state and local regulations. <p>Determine if installation environmental staff are familiar with and knowledgeable in regulatory requirements.</p> <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the Environmental Protection Committee (EPC) informed as needed.</p>
HW.1.2. Non-DOD owned toxic or hazardous wastes may not be disposed of on DOD installations (DODI 4715.3, para D10) [August 1996].	<p>Verify that non-DOD owned toxic or hazardous wastes are not disposed of on DOD installations.</p>

COMPLIANCE CATEGORY: HAZARDOUS WASTE MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999

COMPLIANCE CATEGORY: HAZARDOUS WASTE MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>HW.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>HW.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this check list (A finding under this checklist item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

COMPLIANCE CATEGORY: HAZARDOUS WASTE MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
ALL SIZES OF GENERATORS HW.10 General HW.10.1. Installations are required to characterize their hazardous waste streams through a waste analysis plan, a waste stream inventory, and hazardous waste profile sheets (AFI 32-7042, para 2.4.2, 2.4.3, and 2.4.4; AFI 48-199, para 9.3).	<p>Verify that the installation has characterized hazardous waste by developing a waste analysis plan that includes the following:</p> <ul style="list-style-type: none"> - the wastes evaluated and analyzed - test methods used - hazardous waste sampling methods - sample analysis locations and frequency - descriptions of analytical methods used - sample documentation - sample quality assurance/quality control procedures - sample request procedures. <p>(NOTE: Waste analysis is to be conducted by using the waste generators knowledge of the waste or by analytical testing.)</p> <p>Verify that the waste streams are evaluated as necessary to ensure waste stream characteristics have not substantially changed.</p> <p>(NOTE: Appendix 4-1 contains recommended re-evaluation frequencies for chemical mixture waste streams.)</p> <p>(NOTE: Describe re-evaluations in the waste analysis plan.)</p> <p>Verify that chemical and physical analysis documentation is kept for each waste stream sampled for hazardous waste determination.</p> <p>Verify that the hazardous waste stream inventory describes all of the hazardous waste streams generated and includes the following information:</p> <ul style="list-style-type: none"> - identification of the generating activity - location of the generating activity - unique waste stream number - estimated annual quantity disposed - disposal location - disposal method - waste characteristics information (USEPA/state waste code, USEPA priority pollutant number etc.).

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>HW.10.2. Installations that generate hazardous waste are required to have a Hazardous Waste Management Plan (AFI 32-7042, para 2.2 and Attachment 2).</p>	<p>Verify that waste stream descriptions are documented on hazardous waste profile sheets, DRMS Form 1930.</p> <p>Verify that the plan is reviewed annually by the EPC and updated as needed.</p> <p>Verify that the plan contains the following:</p> <ul style="list-style-type: none"> - a letter of instruction - information and emergency contacts - introductory materials - introduction - responsibilities - organizational chart - location maps - hazardous waste inventory - waste analysis plan - hazardous waste management procedures - reporting - training - contingency plan summary - preparedness and spill prevention summary - pollution prevention summary.
<p>HW.10.3. Generating activities that generate hazardous wastes and use the DRMO for disposal of hazardous waste are required to follow established procedures (<i>Air Force Hazardous Waste Management Policy</i>, 6 June 1991, Appendix C, Section B).</p>	<p>Determine, by examining records and through interviews, if:</p> <ul style="list-style-type: none"> - generating activities provide a Hazardous Waste Profile Sheet with the waste - generating activities hand-carry AF Form 2005 to Base Supply to initiate timely action - generating activities hand-carry DD Form 1348-1 when received from Base Supply to Environmental Planning for certification - generating activities hand-carry certified DD Form 1348-1 from Environmental Planning to DRMO. <p>(NOTE: HQ USAF/CEV 25 September Memorandum, <i>Hazardous Waste Disposal</i>, allows the installations to use alternate procedures where the installation hazardous waste managers prepare and certify the DD Form 1348-1 instead of Base Supply. The HWMP needs to indicate what procedure is used. In the approved alternate procedure no AF2005 is prepared and the hazardous waste managers also maintain records of all transactions.)</p> <p>Examine records and interview Base Supply (Customer Service Unit) to determine if:</p> <ul style="list-style-type: none"> - computer records of all hazardous waste transfer actions are maintained

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>HW.10.4. Environmental Planning is responsible to maintain generating data for measuring waste minimization goals (AF Hazardous Waste Management Policy, 6 June 1991, para V).</p>	<ul style="list-style-type: none"> - a DD Form 1348-1 is processed for each transaction that includes the hazardous waste stock number, waste quantity, and applicable disposal cost and funding information. <p>Examine records and interview Environmental Planning and DRMO to determine if:</p> <ul style="list-style-type: none"> - a letter identifying personnel eligible to certify hazardous waste disposal turn-in documents (DD Form 1348-1) is current and on file at the servicing DRMO - all DD Forms 1348-1 are properly certified indicating that hazardous waste is properly identified (USEPA identification number), labeled, and packaged - DD Form 448, <i>Military Interdepartmental Purchase Request (MIPR)</i>, has been executed with DRMO and the Accounting and Finance Office (AFO) and AFO maintains DD Form 448 after execution - billings from DRMO on a standard form (SF) 1080 and through the AFO are reviewed and certified for payment by Environmental Planning. <p>Examine records and interview the BEE to verify that:</p> <ul style="list-style-type: none"> - the BEE conducts a semiannual review of the health hazard listing to review all IEX 8 and 9 items to determine if health hazard items produce a specific hazardous waste - nomenclatures are included in the health hazard listing - the BEE reviews all plans to build or modify facilities used to treat, store, or dispose of hazardous waste - hazardous waste numbers are verified for the specific wastes. <p>(NOTE: The waste minimization program may be referred to as a pollution prevention program.)</p> <p>Examine hazardous waste records and determine if, at minimum, the following information is maintained:</p> <ul style="list-style-type: none"> - type and quantity of waste generated - generating activity - disposal activity - dates transferred - ultimate disposal. <p>Verify that a log of generator's turn-ins is maintained using turn-in documents as a source of data.</p> <p>Determine if each installation that produces hazardous waste has a hazardous waste minimization program in place.</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>HW.10.5. Installations are required to designate an individual to be responsible for the proper management of each accumulation point (AFI 32-7042, para 2.5.1.2).</p> <p>HW.10.6. All installation personnel who handle hazardous waste are required to meet certain training requirements (AFI 32-7042, para 2.3).</p> <p>HW.10.7. Training records are required to be maintained for all installation staff who manage hazardous waste (AFI 32-7042, para 2.3.3).</p>	<p>Verify that Environmental Planning provides quarterly summaries of generation data, prior year data, and waste minimization baseline year data (normally calendar year 1986) to the EPC for evaluating progress in hazardous waste minimization. The same data is also used in the Annual Defense Status Report.</p> <p>Verify that individuals are designated as responsible for each accumulation point.</p> <p>Verify that all personnel who work with hazardous waste, and their supervisors, receive, and successfully complete, hazardous waste training prior to working with hazardous waste.</p> <p>Verify that annual refresher training is completed.</p> <p>Verify that the training program includes the following:</p> <ul style="list-style-type: none"> - introduction to RCRA - identification of hazardous wastes - accumulation point management - container use, marking and labeling, an onsite transportation - waste turn-in procedures - manifesting and transportation of hazardous wastes - spill prevention and response to emergencies - waste minimization - personnel safety and health and fire safety. <p>Verify specifically that accumulation point managers and hazardous waste handlers have been trained.</p> <p>(NOTE: Hazardous Waste Operations and Emergency Response (HAZWOPER) training may fulfill this requirement depending on the duties of the individual.)</p> <p>Verify that training records of former employees are kept for 3 yr from the last date the person worked.</p> <p>Verify that, for all others, training records are maintained permanently (until closure of the installation).</p> <p>Verify, by examination, that training records include the following:</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
	<ul style="list-style-type: none"> - students name - job title - job description - previous hazardous waste training - date training was received - instructor - test scores (optional) - date of annual refresher training.

Appendix 4-1

Re-Evaluation Frequencies for Chemical Mixtures (AFI 32-7042, Table 2)

1. High Volume Hazardous Waste Streams. Sample and analyze each high volume waste stream (more than 3-55 gal drums per year) at least once a year, or whenever there are process, material, or material manufacturer changes.
2. Low Volume Hazardous Waste Streams. Sample and analyze each low volume waste stream (3-55 gal drums or less per year) at least every 3 yr, or whenever there are process, material, or material manufacturer changes.

SECTION 5

NATURAL RESOURCES MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 13-212, Volume 1, *Weapons Ranges*. This AFI, dated 28 July 1994, discusses the management of air to surface weapons ranges.
- AFI 32-7064, *Integrated Natural Resources Management*. This AFI, dated 1 August 1997, identifies compliance requirements for integrated natural resources management [Revised December 1997].
- AFI 91-202, *The U.S. Air Force Mishap Prevention Program*. This AFI, dated 1 August 1998, establishes mishap prevention program requirements, including the Bird/Aircraft Strike Hazard (BASH) reduction program [Revised June 1998].

B. Department of Defense (DOD) Directives and Instructions

- DOD Instruction (DODI) 4715.3, *Environmental Conservation Program*. This instruction, dated 3 May 1996, does the following:
 1. implements policy, assigns responsibilities, and prescribes procedures for the integrated management of natural and cultural resources on property under DOD control
 2. authorizes the publication of *A Resource Manager's Guide to Volunteer and Partnership Programs* and *A Guide to Integrated Natural Resources Management*
 3. establishes the DOD Conservation Committee that reports to the Environmental Safety and Occupational Health (ESOH) Policy Board
 4. designates DOD Executive Agents to lead DOD implementation of key conservation issues as listed in the following table:

Executive Agent	Conservation Issue
Navy	Chesapeake Bay Program
Navy	Gulf of Mexico Program
Army	Mojave Desert Ecosystem Initiative
Navy	Partners In Flight Initiative
Air Force	Biodiversity Initiative
Navy	Coastal America Initiative
Air Force	Cold War Initiative
Army	DOD Forestry Reserve Account Program

This DODI is not applicable to the Civil Works function of the Army.

C. Using the TEAM Guide for ECAMP

- No additional instructions.

D. Key Air Force/DOD Compliance Requirements

- Personnel - Personnel designated for natural resources responsibilities are required to undergo natural resources training.
- Management Plans - Installations in consultation with state forestry office, state game and natural resources departments, U.S. Fish and Wildlife Service (FWS), or the Natural Resources (Soil) Conservation Service, determine if sufficient habitat warrants an integrated natural resources management plan (INRMP). The management plan is based on an interdisciplinary approach to ecosystem management that integrates all aspects of natural resources management with each other and the rest of the installation's mission. Integrated plans include short term operational component plans (as resources are available) such as threatened and endangered species, wetlands, and floodplains, fish and wildlife, forestry, outdoor recreational, and agricultural outleasing.
- Land Management - Installations are required to follow operational and maintenance procedures if they have grazing or croplands. Landscaping at the installation must be done to make maximum use of native and locally adapted plants. If there are forests at the installation they must be managed according to specific parameters, especially if timber harvesting is occurring.
- Floodplains and Wetlands - Installations are required to identify, classify, map, and protect floodplains and wetlands.
- Endangered/Threatened Species - A survey will be done to determine if the installation has any such species, and measures taken to maintain them.
- Outdoor Recreation Resources - Installations with outdoor recreation resources are required to consult with the National Park Service (NPS) for classifying areas. The use of off-road vehicles (ORVs) is restricted to areas that will sustain use without damaging natural or cultural resources.
- Cooperative Agreements - Installations will maintain liaison with agencies through cooperative agreements. These agreements assist in developing and implementing well-coordinated, multiple- use natural resource programs. One example is the Memorandum of Understanding (MOU) between the Air Force, other Federal land management agencies, and several private conservation organizations to develop the Watchable Wildlife Program.
- Coastal Zones - While coastal zones are regulated at the state level, the Air Force has entered into an agreement with the Coastal America National Implementation Team to coordinate and cooperate in the restoration and protection of coastal zones. This agreement has resulted in guidance being distributed to appropriate installations for implementation.

E. Key Compliance Personnel

- Base Civil Engineering (BCE)/Environmental Management. The BCE is responsible for funding, supervising, controlling, and managing the installation's natural resources program.
- Natural Resources Manager. The Natural Resources Manager is responsible for preparing management plans and cooperative agreements, budgets, and the annual natural resources report. The natural resources manager also implements and controls all activities in furtherance of natural resources management. On installations without a full-time Natural Resources Manager, these duties would normally be assigned to the environmental coordinator or community planner.
- Air Force Civil Engineering Support Agency (AFCESA). AFCESA provides technical assistance on grounds maintenance and integrated pest management.

- Air Force Center for Environmental Excellence (AFCEE). AFCEE provides technical expertise on land-use planning and conservation of historical, archaeological, and biological resources. These include wetlands, threatened and endangered species, and a variety of other areas.
- Range Management Agency. The Range Management Agency is responsible for activities at an air-to-ground range, including planning for the range.

F. Key Air Force/DOD Compliance Definitions

- *Agricultural Outleasing* - the use of DOD lands under a lease to an agency, organization, or person for the purpose of growing crops or grazing animals (AFI 32-7064, Attachment 1).
- *Animal Unit (AU)* - a convenient denominator for use in calculating relative grazing impact of different kinds and classes of livestock and of common wildlife species. One AU equals a mature (1000 lb) cow, or the equivalent, based upon average daily forage consumption of 26 lb of dry matter per day (AFI 32-7064, Attachment 1).
- *Biodiversity* - the variety of life forms and processes and the environment in which they occur. Biodiversity includes the number and variety of living organisms, the genetic differences among them, the communities and ecosystems in which they occur, and the ecological and evolutionary processes that keep them functioning, yet ever changing and adaptable (DODI 4715.3, Enclosure 3).
- *Biological Diversity* - the variety of life forms, the ecological roles they perform, and the genetic variability they contain within any defined time and space (AFI 32-7064, Attachment 1) **[Revised June 1998]**.
- *Commercial Forest Land* - land under management, capable of producing at least 20 ft³ of merchantable timber per acre a year. It must be accessible and programmed for silvicultural prescriptions. The smallest area for this classification is 5 acres. Roadside, streamside, and shelterbelt strips of timber must have or be capable of producing a crown width of at least 120 ft³ to be classified as a commercial forest (AFI 32-7064, Attachment 1).
- *Conservation Self Assessment* - a multimedia inspection or evaluation of an installation's natural and cultural resource program. External conservation self-assessments are conducted by designated DOD representative from outside the installation being inspected. Internal conservation self-assessments are usually conducted by installation personnel (DODI 4715.3, Enclosure 3).
- *Cooperative Agreement* - a written agreement between an AF installation and one or more outside agencies (Federal, state, or local) that coordinates planning strategies. It is a vehicle for obtaining assistance in developing natural resources programs (AFI 32-7064, Attachment 1) **[Revised December 1997]**.
- *Critical Habitat* - any air, land, or water area (excluding existing synthetic structures or settlements that are not necessary to the survival and recovery of a listed species) and constituents thereof that the USFWS has designated as essential to the survival and recovery of an endangered or threatened species (AFI 32-7064, Attachment 1) **[Revised December 1997]**.
- *Cropland* - land primarily suited for producing farm crops, including grain, hay, and truck crops (AFI 32-7064, Attachment 1).
- *Ecosystem Management* - a goal driven approach to managing natural and cultural resources that supports present and future mission requirements; preserves ecosystem integrity; is at a scale compatible with natural processes; is cognizant of nature's timeframes; recognize social and economic viability within functioning ecosystems; is adaptable to complex and changing requirements; and is realized through effective partnerships among private, local, State, tribal and Federal interests. Ecosystem management is a process that considers the environment as a complex system functioning as a whole, not as a collection of parts, and recognizes that people and their social and economic needs are a part of the whole (DODI 4715.3, Enclosure 3) **[Revised December 1997]**.

- *Ecosystem Management* - an approach to natural resources management that focuses on the interrelationships of ecological processes linking soils, plants, animals, minerals, climate, water, and topography. Managers view such processes as a living system that affects and responds to human activity beyond traditional commodity and amenity uses. They also acknowledge the importance of ecosystem services such as water conservation, oxygen recharge, and nutrient recycling (AFI 32-7064, Attachment 1).
- *Exotic Species* - species that occur in a given place, area, or region as the result of direct or indirect, deliberate or accidental introduction of the species by human activity (DODI 4715.3, Enclosure 3).
- *Exotic Species* - any plant or animal not native to a region, state, or country. (This definition excludes common game species which have become established, such as pheasants) (AFI 32-7064, Attachment 1) **[Revised December 1997]**.
- *Floodplains* - lowland or flat areas adjoining inland and coastal waters, including areas on offshore islands, that are prone to flooding (AFI 32-7064, Attachment 1) **[Revised December 1997]**.
- *Forest Land* - land on which forest trees of various sizes constitute at least 10 percent of the area. This category includes open land that is capable of supporting trees and is planned for forest regeneration and management (AFI 32-7064, Attachment 1) **[Revised December 1997]**.
- *Game* - any species of fish or wildlife for which state or Federal laws and regulations prescribe hunting seasons and bag or creel limits (AFI 32-7064, Attachment 1) **[Revised December 1997]**.
- *Grazing Land* - land with vegetative cover that consists of grasses, herbs, and shrubs valuable as forage (AFI 32-7064, Attachment 1).
- *Improved Grounds* - grounds on which personnel annually plan and perform intensive maintenance activities. These are developed areas of an installation that have lawns and landscape plantings that require intensive maintenance. These usually include the cantonment, parade grounds, drill fields, athletic areas, golf courses (excluding roughs), cemeteries, and housing areas (AFI 32-7064, Attachment 1) **[Revised December 1997]**.
- *Integrated Natural Resources Management Plan* - an integrated plan based, to the maximum extent practicable, on ecosystem management that shows the interrelationships of individual components of natural resources management (e.g., fish and wildlife, forestry, land management, and outdoor recreation) to mission requirements and other land-use activities affecting an installation's natural resources (DODI 4715.3, Enclosure 3).
- *Outdoor Recreation* - recreation that relates directly to and occurs in natural, outdoor environments (AFI 32-7064, Attachment 1).
- *Range Classifications* - ranges are classified as follows (AFI 13-212, Volume I, Attachment 1):
 1. Class A. This range is manned, has a scoring capability from the ground, and has a Range Control Officer on the ground who controls aircraft using the range. An air combat maneuvering instrumentation (ACMI) system range is also considered a class A range.
 2. Class B. This range is either manned or unmanned and has a scoring capability from the ground but does not have a Range Control Officer on the ground at the range controlling aircraft. The Range Control Officer function may be performed by the flight lead, forward air controller, or other person as briefed.
 3. Class C. This range is unmanned with no scoring or aircraft control from the ground. The Range Control Officer's function may be performed by the flight lead, forward air controller, or other person as briefed.
- *Semi-Improved Grounds* - grounds where personnel perform periodic maintenance primarily for operational and aesthetic reasons (such as erosion and dust control, bird control, and visual clear zones). These usually include grounds adjacent to runways, taxiways, and aprons; runway clear zones; lateral safety zones; rifle and pistol ranges; picnic areas; ammunition storage areas; antenna facilities; and golf course roughs (AFI 32-7064, Attachment 1) **[Revised December 1997]**.

- *Significant Resources* - resources identified as having special importance or as having, or likely to have, more influence on a particular aspect of the environment than other components (DODI 4715.3, Enclosure 3)
- *Unimproved Grounds* - grounds normally managed by the natural resources staff on an installation or in firing ranges or annexes in support of the AF mission and to achieve integrated resources goals defined in the INRMP. All grounds not expressly defined as improved or semi-improved are unimproved. Unimproved grounds include weapons firing and bombing ranges, forest lands; cropland and grazing lands; grasslands or ranges; lakes, ponds, and wetlands; and areas in airfield beyond the safety zones (AFI 32-7064, Attachment 1) [**Revised December 1997**].
- *Wetlands* - lands where saturation is the dominant factor determining the nature of the soil development and the types of plant and animal communities living in the soil and on its surface. Common terms used to describe various wetlands include marshes, bogs, swamps, small ponds, sloughs, potholes, vernal pools, and wet meadows (DODI 4715.3, Enclosure 3).
- *Wetlands* - areas inundated or saturated by surface or groundwater at a frequency and a duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (AFI 32-7064, Attachment 1).

G. Additional Records To Review

- Integrated Natural Resources Management Plan:
 - Land Use Plan
 - Land Management Plan
 - Master Plan
 - Fish and Wildlife Plan
 - Fish and Wildlife Cooperative Agreements
 - Outdoor Recreation Plan
 - Outdoor Recreation Cooperative Agreement
 - Cropland and Grazing Plan
 - Forest Management Plan
- Grounds Maintenance Contracts
- Agricultural Outleasing Contracts
- Reports of MAJCOM and HQ USAF Staff Assistance Visits
- Threatened and Endangered Species Surveys
- All Permits

H. Additional Physical Features To Inspect

- Military training areas (condition)
- Ordnance storage and disposal areas (condition)
- Grounds maintenance areas (beautification and condition)
- Forest management areas (condition and management)
- Agricultural and grazing lease areas (condition and management)
- Sensitive and critical habitat areas (condition and management)
- Wetlands and floodplains (condition and management)
- Unimproved areas (condition and management)
- Natural resources related to permitted projects
- Surface water and stormwater management systems
- Erosion sites (condition and erosion)
- Shorelines
- Gas/mineral leases
- Construction sites

- Facilities constructed in the last 2 yr (erosion and landscaping)
- Wildlife habitat

I. People To Interview [Revised June 1998]

- Natural Resources Manager
- Environmental Coordinator
- Services Squadron (MWR)
- Outdoor Recreation POC
- BCE Community Planner
- Installation Forester

J. Guidance for Air Force Supplement Natural Resources Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	NR.1.1 through NR.1.17
Missing Checklist Items	NR.2.1
Land Management	NR.10.1 through NR.10.8
Water Resources Management	NR.15.1 through NR.15.3
Wildlife Management	NR.20.1 through NR.20.7

Appendix 5-1, Programming and Budgeting Priorities for Conservation Programs.

Appendix 5-2, Conservation Measures of Merit.

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NR.1 ALL INSTALLATIONS NR.1.1. Copies of all relevant Federal, state, and local regulations on natural resources should be maintained at the installation (MP) [Revised April 1999].	<p>Determine whether copies of the following natural resource regulations are maintained and kept current at the installation and are ready:</p> <ul style="list-style-type: none"> -EO 12088, <i>Compliance With Pollution Standards</i>. -EO 11988, <i>Floodplain Management</i>, 24 May 1977, amended by EO 12148, 20 July 1979. -EO 11990, <i>The Protection of Wetlands</i>, 24 May 1977, amended by EO 12608, 9 September 1987. -50 CFR 402, <i>Interagency Cooperation-Endangered Species Act 1973, as amended</i>. -DODI 4715.3, <i>Environmental Conservation Program</i>. -AFI 13-212, <i>Weapon Ranges</i>. -AFI 32-7064, <i>Integrated Natural Resources Management</i>. -AFI 91-202, <i>U.S. Air Force Mishap Prevention Program</i>. -applicable state and local regulations (including endangered and threatened species lists). <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the Environmental Protection Committee (EPC) informed as needed.</p>
NR.1.2. Natural Resources Managers are required to be trained for natural resources responsibilities (AFI 32-7064, para 14.4) [Revised December 1997].	<p>Verify that Natural Resources Managers have attended the <i>DOD Management of Cultural and Natural Resources: Air Force Training Module</i> course.</p> <p>(NOTE: Attendance may be onsite or through correspondence.)</p>
NR.1.3. Air Force personnel are required to be trained about natural resources as appropriate to their responsibilities (AFI 32-7064, para 14.1 through 14.2 and DODI, 4715.3, para D1(j)) [Revised October 1998].	<p>Verify that basic information on natural resources is incorporated into information forums at all levels (i.e., newcomer orientation briefings), including formal course curricula.</p> <p>Verify that personnel assigned duties in natural resources have the appropriate knowledge, skills, professional training, and education to carry out their responsibilities.</p>
NR.1.4. The Installation's Natural Resources Manager	<p>Determine if the Natural Resources Manager is included in the coordination</p>

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<p>should be included in the coordination process for all actions that may impact the installation's natural resources (MP).</p> <p>NR.1.5. The installation is required to have an INRMP based on the ecosystems found at the installation (AFI 32-7064, para 2.1 and 2.3 and DODI 4715.3, para D2(b), D2(h) and Enclosure 7) [Revised December 1997].</p>	<p>process for all actions that may affect the installation's natural resources.</p> <p>Determine if the installation contacted the following, as applicable, to determine if sufficient habitat warrants an INRMP:</p> <ul style="list-style-type: none"> - state forestry office - state game/natural resources department - FWS - the Natural Resources Conservation Service. <p>Verify that the INRMP is reviewed annually and the number of acres of the installation falling into improved, semi-improved, and unimproved grounds are updated annually.</p> <p>(NOTE: The MAJCOM makes the final decisions as to whether or not an INRMP is required.)</p> <p>Verify that the INRMP is prepared and revised with input from an interdisciplinary team and all revisions are coordinated through the EPC</p> <p>Verify that short-term operational component plans are developed if needed.</p> <p>Verify that information from the INRMP is integrated with the installation pest management plans and the cultural resources management plans.</p> <p>Verify that new INRMPs and substantive revisions are developed at least every 5 yr and coordinated with the appropriate officials.</p> <p>Verify that the plan generally:</p> <ul style="list-style-type: none"> - includes a summary of general information about the installation's mission and history, as well as specific management information necessary for managing the installation natural resources - provides natural resources context information about the installation's mission and history - identifies all legal requirements pertinent to natural resources management - identifies the installations natural resources - recommends procedures for managing the installation's natural resources in a manner that is compatible with the installation's missions, satisfies legal requirements, and is consistent with ecosystem management principles and guidelines - establishes priorities for natural resources management that ensure

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	<p>compliance with legal requirements and ongoing stewardship responsibilities</p> <ul style="list-style-type: none"> - provides management procedures for ongoing identification, maintenance, and enhancement of natural resources - promotes the use of natural resources in ways that are beneficial to the military mission, the resources, and other public interests - is thoroughly integrated with other installation plans, including the Installation Cultural Resources Management Plan (ICRMP), the installation master plan, the facilities maintenance plan, training and range management plans, mobilization and deployment plans, and information management systems - establishes requirements, goals, and targets that can be easily reflected in budget documents and decisionmaking processes, and addressed in conservation self-assessments - addresses natural resources, ecosystem, and areas of critical or special concerns from both technical and policy standpoints. <p>Verify that the INRMP specifically includes the following:</p> <ul style="list-style-type: none"> - a summary of known natural resources information - analysis of the sufficiency of the existing information on natural resources and associated contexts to meet compliance requirements - information on areas that have not been inventoried and a plan for completion of the inventory - identification and prioritization of actions required to implement goals and objectives of the plan - identification of the type and location of actions that may affect natural resources - procedures to ensure that actions of the installation and its tenants are planned and are carried out in ways that protect and enhance natural resources - identification of unique natural resources issues confronting the installation - conservation and mitigation strategies for threatened natural resources - coordination processes between the installation, regulatory agencies, and the public that help ensure proper management of installation natural resources - provisions for sharing appropriate natural resources information with Federal and state agencies, nongovernmental organizations, researchers, and the general public - standard operating procedures for routine occurrences, and where blanket statements can coordinate a process, such as inventories, repetitive ecosystem maintenance and enhancement, and spill responses where natural resources are involved and tailored for the particular conditions at the installation - procedures for consulting with all interested groups and individuals that represent an interest in natural resources - provisions for enforcement of natural resources laws and regulations by professionally trained personnel - provisions for public access to natural resources as appropriate.

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<p>NR.1.6. Installations are required to establish a natural resources management database to track program progress and maintain current maps showing locations of natural resources (AFI 32-7064, para 2.5) [Revised December 1997].</p>	<p>Verify that the installation has established and is maintaining a natural resources management database.</p> <p>Verify that current maps are in a scale practical for the installation and are maintained with the locations of all current natural resources assets.</p> <p>Verify that maps are reviewed and updated annually.</p> <p>Verify that, if the natural resources map data is digitized, it was done using a Geographical Information System (GIS) database compatible with that used for installation comprehensive planning.</p>
<p>NR.1.7. The database should contain all issued permits (MP).</p>	<p>Verify that the database contains all issued permits.</p>
<p>NR.1.8. A Comprehensive Range Plan that addresses noise problems is required for all air-to-ground training and test ranges (AFI 13-212, Volume 1, para 1.10.1.1) [Citation Revised April 1999].</p>	<p>Determine if a range plan exists and review a copy of the range plan.</p> <p>Verify that planning involved all range users and affected agencies including legal and public affairs offices.</p> <p>Verify that, for new ranges, a plan is developed not later than 1 yr after the range has become operational.</p>
<p>NR.1.9. The range plan is required to be updated as needed but at a minimum of every 2 yr (AFI 13-212, Volume 1, para 1.10).</p>	<p>Determine the date of last range plan revision.</p>
<p>NR.1.10. Each installation with flying operations is required to have a written Bird/Aircraft Strike Hazard (BASH) Plan (AFI 91-202, para 7.11.1.4 and 7.11.2) [Revised June 1998].</p>	<p>Determine if the installation has flying operations.</p> <p>Verify that the installation has a written BASH reduction program.</p> <p>Verify that the Wing, Base, and Installation Safety Office participated in the coordination of the BASH reduction program.</p> <p>Verify that there is a Bird Hazard Working Group (BHWG) consisting of organizations involved in airfield bird control, habitat management, operations and</p>

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	<p>safety and:</p> <ul style="list-style-type: none"> - meets at least semi-annually - is chaired by the vice wing commander or equivalent - maintains minutes. <p>Verify that the BHWG established airfield mowing zone boundaries.</p> <p>Verify that the airfield is mowed to a uniform grass height between 7 and 14 in.</p> <p>Verify that the installation has a Bird Hazard Warning System to inform aircrews of possible flight hazards due to bird activity in local areas.</p> <p>Verify that the BASH program:</p> <ul style="list-style-type: none"> - includes all tenant flying units - documents local wildlife hazards, effects on missions, and possible solutions - documents coordination with the host activity on reducing wildlife hazards when applicable. <p>(NOTE: Tenant units located on an airfield that is not hosted by the Air Force, Air Force Reserve, or Air National Guard will establish a BASH program with the host activity.)</p> <p>Verify that the flight safety office, with the assistance of other base agencies, coordinates on an operations plan and that the plan has been implemented.</p>
<p>NR.1.11. The management and conservation of natural resources under DOD control will not be contracted (DODI 4715.3, para D1(m)) [October 1996].</p>	<p>Verify that the management and conservation of natural resources under DOD control, including planning, implementation, and enforcement functions, are not contracted.</p> <p>(NOTE: DOD Components that have contractor-operated installations or facilities are required to ensure that contract instruments clearly address contractor and government functions as they relate to natural resources.)</p>
<p>NR.1.12. Natural resources are required to be managed to support and be consistent with the military mission while also protecting and enhancing resources for multiple use, sustainable yield, and biological integrity (DODI 4715.3, para D2(a)) [October</p>	<p>Verify that natural resources are managed to support and be consistent with the military mission while also protecting and enhancing resources for multiple use, sustainable yield, and biological integrity.</p> <p>Verify that land-use practices and decisions are based on scientifically sound conservation procedures and techniques and ecosystems approach is used.</p>

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<p>1996].</p> <p>NR.1.13. Conservation self-assessments are required to be done according to specific parameters (DODI 4715.3, para D1(c)) [October 1996].</p> <p>NR.1.14. Biologically or geographically significant or sensitive natural resources or species are required to be inventoried (DODI 4715.3, para D2(c), para F1(h)(1)) [Citation Revised April 1999].</p> <p>NR.1.15. Current and planned installation programs, plans, and projects are required to be integrated and compatible with natural resources programs, plans, and projects (DODI 4715.3, para F1(b)) [October 1996].</p> <p>NR.1.16. Cooperative agreements entered into with other entities to provide for the maintenance and improvement of natural resources must contain specific language (DODI 4715.3, para F1(e)) [October 1996].</p> <p>NR.1.17. Prior to disposal of property, significant natural</p>	<p>Verify that internal self-assessments are done annually at all installations that require an INRMP.</p> <p>Verify that external conservation self-assessments are done at least once every 3 yr at all installations that require an INRMP.</p> <p>Verify that, at a minimum, the reviews assess adherence to the DOD funding priorities in Appendix 5-1 and the status of the measure of merit in Appendix 5-2.</p> <p>Verify that biologically or geographically significant or sensitive natural resources or species are inventoried.</p> <p>(NOTE: This includes wetlands, forests floodplains, watersheds, estuaries, riparian areas, coastal barrier islands, marine sanctuaries, critical habitats, animal migration corridors, threatened or endangered species, certain marine mammals, and migratory birds.)</p> <p>Verify that the biological inventory includes, at a minimum, soils, vegetative communities, critical objects, and delineation of wetlands and water sources.</p> <p>Verify that current and planned installation programs, plans, and projects are integrated and compatible with natural resources programs, plans, and projects.</p> <p>(NOTE: Examples of plans and projects include training and test range management plans, master plans, integrated pest management plans, endangered species recovery plans, golf course management plans, grounds maintenance plans, facilities construction site approvals, and other land-use activities.)</p> <p>Verify that cooperative agreements contain language that states the DOD Component will carry out its obligations under the agreement to the extent that funding is available.</p> <p>Verify that all significant natural resources have been identified and a</p>

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resources must be identified (DODI 4715.3, para F1(l) and F1(2)) [Citation Revised April 1999] .	determination made of whether they may be affected by the disposal action. Verify that disposal plans are provided to appropriate agencies, organizations, and individuals and a reasonable opportunity for review and comment is provided before proceeding with disposal.

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NR.2 MISSING CHECKLIST ITEMS NR.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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<p>NR.10</p> <p>LAND MANAGEMENT</p> <p>NR.10.1. Specific actions are required to be taken if the installation determines that proposed actions will take place in a floodplain (AFI 32-7064, paras 4.1 through 4.3) [Revised December 1997].</p> <p>NR.10.2. Landscape development, design, and maintenance is required to be done according to specific parameters (AFI 32-7064, para 11.1, 11.7.1, and DODI 4715.3, para D2(i)) [Revised December 1997].</p> <p>NR.10.3. DOD lands are required to be reviewed for their suitability for commercial forestry uses and forest management operational component plans are required to meet specific parameters (AFI 32-7064, para 8.1 and DODI 4715.3, para D2(e), para F2(c), and F2(d)) [Citation Revised]</p>	<p>Verify that the installation used the National Flood Insurance Program (NFIP) maps that FEMA generates to determine whether a proposed action occurs in a floodplain.</p> <p>(NOTE: If maps are not available for the installation, a hydrologic analysis should be done and USACE confirm and approve the analysis.)</p> <p>Verify that the installation has requested the Deputy Secretary of the Air Force for Environment, Safety, and Occupational Health (SAF/MIQ) or another designated official to sign a Finding of No Practicable Alternative (FONPA) before taking any actions in a floodplain.</p> <p>Verify that, if the only practicable alternative is to site in a floodplain, actions are designed or modified to minimize potential harm.</p> <p>(NOTE: A floodplain may be a wetland.)</p> <p>Verify that landscape development on improved grounds will make maximum use of native and locally adapted plant materials.</p> <p>Verify that landscape development avoids invasive exotic species, prevents pollution by reducing chemical usage, promotes design and construction practices that minimize adverse effects on natural habitat, and reduces maintenance inputs in terms of energy, water, equipment, and chemicals..</p> <p>Verify that irrigation of installation grounds is done only when necessary to fulfill justifiable aesthetic or functional user requirements.</p> <p>(NOTE: Water conservation should be encouraged.)</p> <p>Verify that installations with over 500 acres of commercial forest land have developed a forest management component plan as a part of the INRMP.</p> <p>Verify that the plan addresses the following objectives of forest management:</p> <ul style="list-style-type: none"> - state coordination and cooperative agreements - maps and detailed descriptions of individual forest stands - current forest resources inventory data and statistical summary by stands or compartments - descriptions of silvicultural management practices (such as timber stand improvement techniques, harvesting methodology, reforestation practices,

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<p>1997].</p>	<p>management component of the INRMP.</p> <p>Verify that the use of pesticides in the forest area has been coordinated with the MAJCOM pest management professional.</p> <p>Verify that prescribed burning is used to reduce the risk of uncontrolled wildfires and to achieve other ecosystem management objectives.</p> <p>Verify that a plan for prescribed burns is prepared and it includes:</p> <ul style="list-style-type: none"> - copies of all necessary approvals from outside agencies - a map showing all roads, firelines, ridges, hills, streams, and other water resources - an ignition plan - a prescription for acceptable weather parameters and fuel moisture conditions - all resources needed to conduct the burn - an assessment of impacts on wildlife and vegetation - smoke management analysis - analysis for the potential for and methods of reducing nonpoint source pollution - an evaluation of overall ecosystem functioning within the burn area - past fire monitoring - an evaluation to assess effects of the burn - a contingency plan for emergency suppression. <p>Verify that the prescribed burn plan has been developed by a qualified natural resource manager and coordinated with the installation fire department and civilian authorities, adjoining landowners, the state forestry commission, county air quality management offices, and the local air pollution control board.</p>
<p>NR.10.6. Installations that permit agricultural crop production or livestock grazing on installation lands under agreements specified in agricultural outleases, service contracts, or special licenses are required to meet specific standards (AFI 32-7064, para 9.1 through 9.10 and DODI 4715.3, para D2(e), para F2(c) and F2(d)) [Revised December 1997].</p>	<p>Verify that cropland and grazing suitability have been determined in consultation with the state or local offices of the U.S. Department of Agriculture (USDA), the NRCS, state university agricultural extension service, or other technically qualified governmental agencies.</p> <p>Verify that agricultural uses are compatible with the use of the land to support the military mission.</p> <p>Verify that, if agricultural outleasing is done, it is addressed in the INRMP.</p> <p>Verify that outleased lands are monitored to ensure compliance with the agricultural outleasing component of the INRMP and with local land-use regulations.</p> <p>Verify that grazing is not permitted in areas where soils are subject to excessive</p>

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<p>NR.10.7. Installations with the potential for outdoor recreation are required to perform specific tasks (AFI 32-7064, para 10.2) [Revised December 1997].</p>	<p>compaction or where forage plants are not developed sufficiently to support grazing or sensitive species are present.</p> <p>Verify that grazing is not permitted in hardwood forests.</p> <p>Verify that lessees obtain approval for all prescribed burns.</p> <p>Verify that land availability for outleasing is reevaluated every 5 yr.</p> <p>Verify that agricultural uses are compatible with the use of the land to support the military mission.</p> <p>Verify that agricultural products are not given away, abandoned, carelessly destroyed, used to offset contract costs, or traded for services, supplies, products, or otherwise improperly removed.</p> <p>Verify that the installation has consulted with the National Park Service (NPS) and state recreation officials to determine the potential for outdoor recreation.</p> <p>(NOTE: Land designated for outdoor recreation will be classified in one of the following:</p> <ul style="list-style-type: none"> - Class I areas (General Outdoor) which are suitable for intensive recreational activities such as camping, winter sports, and water sports - Class II areas (Natural Environment) which are capable of supporting dispersed recreational activities such as hunting, fishing, birding, hiking, sightseeing, jogging, climbing, and riding - Class III areas (Special Interest) which contain valuable archaeological, botanical, ecological, geological, historic, zoological, scenic, or other features which require protection.) <p>Verify that, if the installation has potential for outdoor recreation, it has developed an Outdoor Recreation Operation Component to the INRMP.</p>
<p>NR.10.8. The use of ORVs is restricted (AFI 32-7064, para 10.6) [Revised December 1997].</p>	<p>Verify that an analysis was done of the impact on erodible soils and wildlife before the use of ORVs was allowed.</p> <p>Verify that the use of licensed and insured ORVs, including dirt bikes and all terrain vehicles, is restricted to areas that will sustain use without damaging natural or cultural resources.</p> <p>Verify that areas damaged from uncontrolled ORV use are closed for further use and the property is rehabilitated to correct the damage.</p>

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<p>NR.15</p> <p>WATER RESOURCES MANAGEMENT</p> <p>NR.15.1. The INRMP at an installation with jurisdictional wetlands will include long-term monitoring of trends (AFI 32-7064, para 3.3.1) [Revised December 1997]..</p> <p>NR.15.2. The Major Command (MAJCOM) is required to survey all acreage under their control for potential wetlands and develop and maintain current inventories (AFI 32-7064, para 3.2.1).</p> <p>NR.15.3. DOD lands are required to be managed for the goal of no net loss of wetlands and the avoidance of adverse impacts on floodplains (AFI 32-7064, para 3.1 and DODI 4715.3, para D2(j) and D2(k)) [Revised December 1997].</p>	<p>Verify that the INRMP includes long-term monitoring of trends in habitat values and plans for reiteration and enhancement of wetlands.</p> <p>Verify that the long-term monitoring methodology is adequate.</p> <p>Verify that a permanent database or inventory of wetlands is established at each installation.</p> <p>Determine if the MAJCOM has delegated the survey of acreage to the installation.</p> <p>Verify that, if the survey responsibility has been delegated, the installation has surveyed all property under the control of the installation.</p> <p>(NOTE: Inspect representative wetlands (that are not currently under a jurisdiction delineation from the COE) to ground-truth the boundaries and evaluate the methodology used.)</p> <p>(NOTE: Omit this checklist item if responsibility has not been delegated.)</p> <p>Verify that DOD operations and activities avoid the net loss of size, function, or value of wetlands.</p> <p>Verify that the operations and activities are performed in a manner which avoid adverse impacts on floodplains.</p>

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<p>NR.20</p> <p>WILDLIFE MANAGEMENT</p> <p>NR.20.1. Installations with threatened or endangered species are required to include specific information in the INRMP (AFI 32-7064, para 7.1) [Revised December 1997].</p> <p>NR.20.2. All installations are required to prepare and maintain a current inventory of endangered species and critical habitat as a part of the installation habitat inventory (AFI 32-7064, para 7.2) [Revised December 1997].</p> <p>NR.20.3. Category I installations are required to develop a fish and wildlife management operational component plan as a part of the INRMP (AFI 32-7064, para 6.1.1 and 6.1.2) [Revised December 1997].</p> <p>NR.20.4. The installation is required to have specific habitat information for determining habitat suitability (AFI 32-7064, para 6.2)</p>	<p>Verify that the installation has prepared a Threatened and Endangered Species component plan as a part of the INRMP.</p> <p>Verify that surveys have been conducted and are regularly updated in coordination with the Federal FWS, state Fish and Wildlife Agency, or non-government organizations such as The Nature Conservancy.</p> <p>Verify that the data from the most recent survey has been included in the INRMP and has been made available to The Nature Conservancy and the state National Heritage Office for inclusion in the Biological and Conservation Database.</p> <p>(NOTE: Category I installations have suitable habitat for conserving and managing fish and wildlife. Category II installations are unsuitable for conserving and managing fish and wildlife because of mission restrictions or resource limitations, or they are of limited size and do not have the unimproved grounds.)</p> <p>(NOTE: To obtain Category II status, the installation must consult with USFWS and the state fish and wildlife agencies to determine whether consumptive or nonconsumptive wildlife habitat exists and whether it has management potential; clearly define any restrictions due to mission; have the installation or support commander approve the Category II status in writing; and send MAJCOM and AFCEE/ECR copies of the approved memo and supporting documentation.)</p> <p>Verify that Category I installations develop a fish and wildlife management component plan.</p> <p>Verify that the installation has a current habitat inventory, description of habitat types, including structure and composition of the vegetation, if present.</p> <p>(NOTE: Use the classification scheme developed by the state National Heritage Office, if available, as a measure of health.)</p>

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<p>[Revised December 1997].</p>	<p>Verify that the inventory is updated at least every 5 yr or sooner if conditions warrant.</p>
<p>NR.20.5. Checklist item consolidated into NR.20.1. [Deleted December 1997].</p>	<p>Checklist item consolidated into NR.20.1.</p>
<p>NR.20.6. Checklist item deleted [Deleted December 1997].</p>	<p>This checklist item has been deleted as a result of the revision of AFI 32-7064.</p>
<p>NR.20.7. Specific actions are required if circumstances require controlling the wildlife population or removing nuisance species (AFI 32-7064, para 6.6) [Revised December 1997].</p>	<p>Verify that, if control of nuisance wildlife is done by pest management personnel, it is described in the Pest Management Plan.</p> <p>Verify that, if control of nuisance wildlife is done by natural resources management personnel, it is described in the INRMP and coordinated with the pest management control personnel.</p> <p>Verify that the Animal and Plant Health Service (APHIS), the USFWS, and the state fish and wildlife agency are notified as soon as practicable.</p> <p>Verify that BASH issues are coordinated with air traffic controllers, airfield managers, operations, flight safety, pest management, ground maintenance, and natural resources personnel.</p>

Appendix 5-1

Programming and Budgeting Priorities for Conservation Programs (DODI 4715.3, Enclosure 4)

A. Class 0: Recurring Natural Resources Conservation Management Requirements.

Includes activities needed to cover the recurring administrative, personnel, and other costs associated with managing DOD's conservation program that are necessary to meet applicable compliance requirements (Federal and state laws, regulations, Presidential EOs, and DOD policies) or which are in direct support of the military mission. Also included are environmental management activities associated with the operation of facilities, installations, and deployed weapons systems. Recurring costs consist of manpower, training, supplies, hazardous waste disposal, operating recycling activities, permits, fees, testing and monitoring and/or sampling and analysis, reporting and recordkeeping, maintenance of environmental conservation equipment, and compliance self-assessments.

B. Class I: Current Compliance

Includes projects and activities needed because an installation is currently out of compliance (has received an enforcement action from a duly authorized Federal or state agency, or local authority); has signed compliance agreement or has received a consent order; has not met requirements based on applicable Federal or state laws, regulations, standards, Presidential EOs, or DOD policies; and/ or are immediate and essential to maintain operating integrity or sustain readiness of the military mission. "Class I" also includes projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable laws, regulations, standards, DOD policies, or Presidential EOs, but deadlines have not passed or requirements are not in force) but shall be if projects or activities are not implemented in the current program year. These activities include the following:

1. Environmental analyses for natural resource conservation projects, and monitoring and studies required to assess and mitigate potential impacts of the military mission on conservation resources.
2. Planning (e.g., 42 USC 434) (documentation, master plans, and integrated natural resource management plans, etc.).
3. Baseline inventories of natural resources.
4. Biological assessments, surveys, or habitat protection for a specific listed species, critical for the protection of the species so that proposed or continuing actions can be modified in consultation with the U.S. FWS or the U.S. National Marine and Fisheries Service to prevent "taking" of the species.
5. Mitigation to meet existing regulatory permit conditions or written agreements.
6. Nonpoint source pollution or watershed management studies or actions needed to meet compliance dates cited in approved state coastal nonpoint source pollution control plans.
7. Wetland delineation, following existing statutory requirements, critical for the prevention of adverse impacts to wetlands without a permit so that continuing actions can be modified to ensure mission continuity.

8. Efforts to achieve compliance with requirements that have deadlines that have already passed, as cited in DOD executed agreements, such as support for the Chesapeake Bay Agreement Action Plan and the DOD Mojave Desert Ecosystem Management Initiative.

C. Class II: Maintenance Requirements.

Includes those projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable laws, regulations, standards, Presidential EOs, or DOD policies but deadlines have not passed or requirements are not in force), but shall be out of compliance if projects or activities are not implemented in time to meet an established deadline beyond the current program year. Examples include the following:

1. Compliance with future requirements that have deadlines.
2. Conservation and Geographic Information System mapping in order to be in compliance with Federal, state, and local regulations, Presidential EOs, and DOD policy.
3. Efforts undertaken in accordance with non-deadline specific compliance requirements for leadership initiatives, such as Coastal America, the "Chesapeake Bay Agreement Action Plan," and "Mojave Desert Ecosystem Management Initiative."
4. Wetlands enhancement in order to achieve the President's order for "no net loss" or to achieve enhancement of existing degraded wetlands.
5. Public education programs that educate the public on the importance of protecting archeological resources.

D. Class III: Enhancement Actions Beyond Compliance.

Includes those projects and activities that enhance conservation resources or the integrity of the installation mission, or are needed to address overall environmental goals and objectives, but are not specifically required under regulation or EO and are not of an immediate nature. Examples include the following:

1. Community outreach activities, such as "Earth Day" and "Historic Preservation Week" activities.
2. Educational and public awareness projects, such as interpretive displays, oral histories, "watchable wildlife" areas, nature trails, wildlife checklists, and conservation teaching materials.
3. Biological assessments, surveys, or habitat protection for a candidate species for listing as "endangered" or "threatened."
4. Restoration or enhancement of natural resources when no specific compliance requirements dictates a course or timing of action.
5. Management and execution of volunteer and partnership programs.

Appendix 5-2

Conservation Measures of Merit (DODI 4715.3, Enclosure 5)

A. Preparation of INRMPs (Number of Installations)

1. Requiring integrated plans.
2. With up-to-date, approved plans.
3. Where an existing plan needs to be updated.
4. Where a plan is appropriate or needed, but does not exist.
5. Where a plan is not appropriate.

B. Completion of Planning Level Survey and Inventory of Biological Resources (Number of Installations)

1. With completed inventories.
2. With partial inventories.
3. Without inventories, but needed.
4. Inventories not needed.

C. Completion of Wetland Inventories (Number of Installations).

1. With completed inventories.
2. With partial inventories.
3. Without inventories, but needed.
4. Inventories not needed.

SECTION 6

OTHER ENVIROMENTAL ISSUES

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A. U.S. Air Force Instructions (AFIs) and Policies

Environmental Impacts

- AFI 32-7061, *The Environmental Impact Analysis Process (EIAP)*. This AFI, dated 24 January 1995, describes specific tasks and procedures for the Air Force EIAP.
- Air Force Policy Letter, *Environmental Impact Analysis Process (EIAP) and Related Compliance Documents*. This letter, dated 3 January 1994, lists documents that are related to EIAP and must be submitted to HQ USAF/CEV.
- Air Force Policy Letter, *Federal Register Publication Information*. This letter, dated 2 November 1993, requires that notices of intent (NOIs) for preparation of an environmental impact statement (EIS) be sent in draft to AF/CEVP.
- Air Force Policy Letter, *MAJCOM Environmental Protection Committee (EPC) Coordination of EIAP Documents*. This letter, dated 26 August 1994, requires documentation indicating prior MAJCOM EPC coordination or approval to accompany EIAP documents sent to HW USAF for senior staff approval or signature.

Environmental Noise

- AFI 13-201, *Air Force Airspace Management*. This instruction, dated 1 April 1998, includes practices to decrease disturbances from flight operations **[Revised June 1998]**.
- AFI 32-7063, *Air Installation Compatible Use Zone (AICUZ) Program*. This AFI, dated 1 October 1998, applies to all Air Force installations with active runways located in the United States and its territories, including government-owned, contractor-operated (GOCO) facilities **[Revised January 1999]**.
- Air Force Policy Letter, *New Land Use Compatibility Policy for Shopping Malls and Shopping Centers for the AICUZ Program*. This letter, dated 9 July 1993, mandates the consideration of shopping malls and centers in the AICUZ land-use compatibility analysis.

Installation Restoration Program (IRP)

- AFI 32-7020, *The Environmental Restoration Program*. This AFI, dated 19 May 1994, provides guidance and procedures for executing the Air Force Environmental Restoration Program, also referred to as the cleanup program.
- HQ USAF/CEV Letter. The letter, *FY 1996/97 Air Force Environmental Restoration Program Management Guidance*, dated 28 June 1995, presents key guidelines and authorities for the IRP.
- Air Force IRP. A biannual publication, *Air Force Installation Restoration Program Management Guidance*, addresses the requirements of the laws, regulations, policies, and procedures concerning the Air Force IRP.

Pollution Prevention

- AFI 32-7080, *Pollution Prevention Program*. This AFI, dated 12 May 1994, outlines the requirements for the Air Force's Pollution Prevention Program. It provides instruction in the areas of program management, ozone-depleting chemicals (ODCs) reductions, hazardous substance management and minimization, solid waste management, affirmative procurement, and energy conservation.
- *Air Force Pollution Prevention Program Action Memorandum*. This outlines the steps that need to be taken by Air Force personnel to prevent future pollution by reducing hazardous material use and releases of pollutants into the environment to as near zero as possible. Air Force Policy on ODCs governs the purchase, use, and management of controlled ODCs. It outlines the ODCs and equipment that use them that cannot be purchased, and it outlines the steps that should be taken to replace ODCs currently in use.
- *Air Force Pollution Prevention Strategy*. This strategy, dated 24 July 1995, details the goals and strategies promoted by the Air Force pollution prevention.
- Engineering Technical Letter (ETL) 95-1, *Halon 1301 Management Planning Guidance*. This ETL, dated 12 May 1995, provides guidance to help manage inventories of Halon 1301.
- AFI 32-7086, *Hazardous Material Management*. This AFI, dated 1 August 1997, establishes procedures and standards that govern management of hazardous materials throughout the Air Force. It specifically addresses the HAZMAT Pharmacy Program (HPP) [Added December 1997].

Program Management

- AFI 13-212, Volume 1, *Weapons Ranges*. This instruction, dated 28 July 1994, discusses the management of weapons ranges.
- AFI 32-7001, *Environmental Budgeting*. This AFI, dated 8 May 1994, provides guidance on identifying, developing, and processing requirements to meet environmental standards at Air Force installations.
- AFI 32-7002, *Environmental Information Management System*. This instruction, dated 31 May 1994, provides guidance and procedures to standardize the use of the Work Information Management System - Environmental Subsystems (WIMS-ES).
- AFI 32-7005, *Environmental Protection Committees*. This instruction, dated 25 February 1994, establishes the Environmental Protection Committee (EPC) to ensure a systematic, interdisciplinary approach to achieve and maintain environmental quality in the Air Force.
- AFI 32-7047, *Compliance Tracking and Reporting*. This AFI, dated 31 March 1994, identifies requirements for managing and reporting enforcement actions and compliance agreements.
- AFI 32-7066, *Environmental Baseline Survey In Real Estate Transactions*. This AFI, dated 25 April 1994, identifies the responsibilities and procedures for conducting an Environmental Baseline Survey (EBS) of the condition of real property subject to a real property transaction.

B. Department of Defense (DOD) Directives and Instructions

- DOD Instruction (DODI) 4715.4, *Pollution Prevention*. This instruction, dated 18 June 1996, implements policy, assigns responsibilities, and prescribes procedures for implementation of pollution prevention programs throughout DOD. In this DODI the Navy has been designated the Executive Agent for ozone-depleting substances. It is specifically stated that this DODI is applicable to GOCOs and facilities supported by

appropriated and nonappropriated funds. The DODI additionally established the following DOD Pollution Prevention Measures of Merit:

1. By the end of calendar year (CY) 1999, reduce total releases and offsite transfers of toxic chemicals 50 percent from the 1994 toxic release inventory baseline. The amount of toxic releases and offsite transfers will be measured and reported in pounds.
2. By the end of CY 1999, reduce the disposal of hazardous waste 50 percent from the 1992 baseline. The amount of hazardous waste disposal will be measured and reported in pounds.
3. By the end of CY 1999, reduce the disposal of nonhazardous solid waste 50 percent from the 1992 baseline. The amount of solid waste disposal will be measured and reported in pounds.
4. By the end of CY 1999, ensure that 50 percent of nonhazardous solid waste generated will be recycled. The amount of nonhazardous solid waste recovered and sold DOD-wide for reuse will be measured and reported in pounds.

This DODI does not apply to procurement, use, generation, storage, processing, disposal, or management in any sense for radioactive materials. It also does not apply to the civil works function of the Department of the Army.

- DODI 4715.7, *Environmental Restoration Program*. This DODI, dated 22 April 1996, addresses policies, responsibilities, and progress assessments for the DERP and the BRAC environmental restoration program.

C. Using the TEAM Guide for ECAMP

- No additional instructions.

D. Key Air Force/DOD Compliance Requirements

Environmental Impacts

- EIAP - The EIAP is the Air Force process for assessing proposed actions as required by NEPA. It consists of the initial review of the proposed action to determine the magnitude and significance of the anticipated environmental impacts. This review determines whether a proposed action can be exempted from further review (categorical exclusion (CATEX)) or whether an environmental assessment (EA) or EIS must be prepared. AFI 32-7061 lists those types of actions that may be a CATEX. An EA is prepared to determine whether the proposed action will have significant environmental impacts. If the analyses indicate that no significant impacts are anticipated, a Finding of No Significant Impact (FONSI) can be issued. If significant impacts are possible, an EIS must be prepared, filed with the USEPA, and made available to the public. (NOTE: The EA and the FONSI must also be made available to the public for a specified length of time before they can be finalized.)

Environmental Noise

- AICUZ Noise Maps - Noise-zone contour maps are included in AICUZ studies or amendments that are completed. HQ USAF/CEVP approval is required before maps are publicly released.
- Noise Awareness/Complaints - A program is required at each applicable installation to distribute information on military training routes, special use airspace, and supersonic areas, or routes. Additionally, installations are required to follow MAJCOM procedures for researching and responding to noise complaints (AFI 13-201, para 3.2.2 and 3.3.) [Added June 1998].

Installation Restoration Program (IRP)

- IRP - The legal mandates for the Air Force Installation Restoration Program are the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendment and

Reauthorization Act (SARA). Objectives of the program are to identify, investigate, cleanup, and close IRP sites. IRP sites may also be subject to corrective action requirements under the Resource Conservation and Recovery Act (RCRA).

Pollution Prevention

- Generator Requirements - The generator of hazardous waste who is issued any permit under RCRA for the treatment, storage, or disposal of hazardous waste on their premises, must certify at least annually, that they have a program in place to reduce the volume or quantity and toxicity of such waste to the degree determined to be economically practicable.
- Hazardous Substance Release Requirements - As part of spill contingency plans and procedures, all practical effort should be made to prevent pollution by:
 1. reducing or eliminating waste at the source
 2. considering potential pollution control problems when selecting chemical compounds and materials to be used in operations
 3. including pollution abatement in specifications.
- Pollution Prevention Management Plan - The preferred method for managing hazardous materials is source reduction. Installations must develop their own pollution prevention program plan following procedures outlined by the MAJCOMs. The plan should address:
 1. the process required to run a pollution prevention program at the installation
 2. the program required to fund pollution prevention projects
 3. the road map to achieve Air Force pollution prevention goals
 4. the actions required to execute the program.
- Hazardous Materials - Substances listed as hazardous need to be selected, used, and managed over their life-cycle so as to economically protect human health and the environment.
- Solid Waste - Substances that may generate materials considered to be solid waste also need to be selected, used, and managed over their life-cycles. In this case, the objective is to reduce the quantities of solid waste that are eventually disposed in landfills.
- Air Emissions Reductions - Installations are required to establish and execute a program to reduce the emissions of air pollutants by DOD nontactical vehicles (DODI 4715.4, para F(2)(e)).
- Hazardous Materials Pharmacy Program (HPP) - Installations are required to implement HPPs. With the HPP the installation will be able to track and reduce the use of hazardous materials. The implementation of this program requires the participation of personnel in CE, SG, LG and multiple other organizations **[Added December 1997]**.

Program Management

- A-106 Report - The A-106 report is required for all Air Force installations and is maintained in WIMS-ES. The report should include all recurring and nonrecurring environmental requirements for the installation. The installation must budget for the requirements recorded in the report through the installation EPC and accounting and finance office. The installation must address environmental priorities that are outlined in USAF policy (Operations and Services, Level I, Level II, and Level III) and must ensure that each program year recorded in the A-106 is executable.
- Environmental Baseline Study (EBS) - An EBS has to be done for real property which has been identified for acquisition, disposal, outgrant, interagency transfer, or termination of temporary interests of the Air Force and non-Air Force parties.

E. Key Compliance Personnel

Environmental Impacts

- The Base Civil Engineering (BCE)/Environmental Management. The BCE/EM provides Environmental Planning Functions (EPF), including managing and getting the technical analyses necessary to support the EIAP.
- The Bioenvironmental Engineer (BEE). The BEE provides technical assistance to EPF concerning environmental quality standards, effects, and monitoring capabilities relating to the action(s) being assessed.
- The EPC. The EPC reviews and approves or disapproves environmental documents prepared by the EPF during the EIAP.
- The Judge Advocate (JA). The JA advises EPF and EPC of legal issues regarding environmental documents, conducts public hearings, and advises EPF during the scoping process of issues to be addressed in EISs.
- The Public Affairs Officer (PAO). The PAO reviews environmental documents for public affair sufficiency and advises EPF on issues to be addressed in EISs.
- Proponent Activity. Proponent Activity is responsible for providing a complete description of the proposed action and alternatives (DOPAA) and for identifying key decision points and assisting in making sure that the EIAP is properly phased so that the environmental documents are available to the decisionmaker.
- Air Force Center for Environmental Excellence (AFCEE). AFCEE assists in the scoping process and in all phases of coordination with Federal, state, regional, and local government agencies.

Environmental Noise

- BCE/Environmental Management. The Environmental Planning Function within the BCE is responsible for carrying out the AICUZ program.
- Airspace Manager. The Airspace Manager within the Office of the Deputy Commander for Operations is responsible for managing special use airspace and military training routes (MTRs).
- PAO. The PAO is responsible for making all public releases of information about Air Force activities

Installation Restoration Program

- The BCE. The BCE normally is responsible for IRP execution. However, this responsibility may be assigned to the installation's Environmental Management Office if one has been established.
- The BEE. The BEE is responsible for providing technical support in remedial investigation/feasibility study (RI/FS), risk analysis, quality assurance/quality control (QA/QC), worker health and safety, and other areas.
- JA. The JA is responsible for providing legal and negotiation support.
- On-Scene Coordinator or Remedial Project Manager (OSC/RPM). The OSC/RPM is responsible for managing response actions and coordinating all other IRP efforts on the installation. Actual execution of these responsibilities can be performed by others (AF personnel, technical support center, contractors, etc.). However, the OSC/RPM must retain overall management oversight responsibility for IRP actions.
- PAO. The PAO is responsible for dissemination of reports providing information to the public and the media, and helping in the preparation of Community Relation Plans.

Pollution Prevention

- Installation Commander (IC). The IC must establish and maintain an active program to survey the use, generation, and disposal of hazardous and radioactive waste. The commander must identify requirements and execute the programs to comply with Air Force policy.
- Logistics Group Commander. The Logistics Group Commander ensures nonhazardous/nontoxic materials are used where possible, maintains a list of hazardous materials used in the work area by shop and maintenance related task, ensures personnel are properly trained in ordering, using, handling, controlling, and storing hazardous materials and wastes, ensures a hazardous materials pharmacy is in place, ensures hazardous waste is properly labeled, works with civil and bioenvironmental engineers to develop the installation's waste management plan, and notifies applicable headquarters when a nonhazardous substitute can be used.
- BCE. The BCE or designated Environmental Management Office (EMO) develops installation- specific policy for all aspects of hazardous waste and pollution prevention management for all activities on the installation including Air Force and non-Air Force tenants. The BCE/EMO also manages the pollution prevention program and serves as the Office of Primary Responsibility (OPR) for developing and implementing the pollution prevention plan.
 1. The BCE is responsible for the maintenance and operation of incinerators, fuel burners (boilers), and all installed petroleum storage and dispensing systems. The BCE is also responsible for the storage and handling of all hazardous materials and fuels used by civil engineering shops.
 2. The Water and Waste Shop within BCE has responsibility for operations and maintenance of treatment plants, pretreatment facilities, pump stations, oil/water separators, and other associated facilities around the installation.
- Bioenvironmental Engineering Services (BES). Bioenvironmental Engineering Services provides installation technical expertise on hazardous waste identification and, along with the Environmental Manager and the Environmental Protection Committee, establishes the baseline inventory of industrial toxics project (ITP) chemical quantities. The BES identifies pollution prevention opportunities based on workplace surveys and recommends substitute processes. The BES reviews all substitutions to ensure substituted materials do not introduce new hazards.
- Supply Officer. The Supply Officer has primary responsibility to receive, store, and issue all items ordered. It serves as the equipment approval authority, administers the supply improvement program, provides technical guidance and assistance on supply matters to agencies across the installation, and serves as the primary stock fund manager.
- Environmental Manager (EM). The Environmental Manager is responsible for managing the installation pollution prevention management program. The EM, along with the BES and the EPC, establishes the baseline inventory of ITP chemical quantities. The EM then tracks the issue of these chemicals, issues all items ordered through the hazardous materials pharmacy, and sends the information to the MAJCOM.
- Environmental Protection Committee (EPC). The EPC is comprised of representatives from all environmental activities involved with compliance, restoration, conservation, and pollution prevention. It reviews and coordinates the installation commander's pollution prevention management program. The committee will review summary data on waste generation and personnel exposure. The EPC helps with establishing the baseline inventory of ITP chemical quantities. It should also adopt a policy recommending against the procurement of hazardous materials containing any USEPA ITP chemicals.
- Hazardous Waste Generating Activities. Generating Activities manage hazardous waste in their custody including proper accumulation, inspection, recordkeeping, labeling of containers, and transfer for disposal.

Program Management

- **Base Environmental Manager.** Base Environmental Manager is responsible for managing the A-106 program, including updating the current plan, inputting new projects, and coordinating with the Civil Engineering Programmer to ensure projects are included in the Civil Engineering Contract Reporting System (CECORS) or the Programming Design and Construction (PDC) System.
- **Civil Engineering Programmer.** Civil Engineering Programmer is responsible for getting projects into the CECORS or the PDC.
- **The EPC.** The EPC is responsible for coordinating and approving the A-106 plan.
- **The BCE.** The BCE or the Environmental Manager will coordinate the input of data into WIMS- ES.

F. Key Air Force/DOD Compliance Definitions

- **Acquisition** - any authorized methods of obtaining Air Force control of and responsibility for real property. An acquisition may be temporary or permanent interest in real property. Includes interagency transfers of real property accountability from other Federal government agencies. Methods include purchase, condemnation, donation, exchange, leasing, licenses, permits, revestments, and recapture (AFI 32-7066, Attachment 1).
- **Acquisition Program** - a directed, funded effort that is designed to provide a new, improved, or continuing weapons system or automated information system (AIS) capability in response to a validated operational need. Acquisition programs are divided into categories, which are established to facilitate decentralized decision making and execution and compliance with statutory requirements (DODI 4715.4, Enclosure 3).
- **Adjacent Properties** - not only those properties contiguous to the boundaries of the installation or subject property, but also those properties relatively nearby that could pose significant environmental impact or concern on the installation or subject property (AFI 32-7066, Attachment 1).
- **Affirmative Procurement** - required by RCRA Section 6002 and EO 12783. Federal agencies must establish programs to encourage purchase of products containing recycled materials. Affirmative procurement programs must establish preference for products containing recycled material, must include a promotion plan to place emphasis on buying recycled, and must have procedures for obtaining and verifying estimates and certifications of recycled content (AFI 32-7080, Attachment 1).
- **Airspace Management** - the coordination, integration, and regulation of the use of airspace of defined dimensions. The objective is to meet command requirements through the safe and efficient use of available navigable airspace in a peacetime environment while minimizing the impact on other aviation users and the public (AFI 13-201, Attachment 1).
- **Alternatives** - ways of reducing adverse effects of hazardous materials. Alternatives, as applied to hazardous material decision making, include, but are not limited to, such possibilities as substituting less hazardous or nonhazardous material; redesigning a component such that hazardous material is not needed in its manufacture, use, or maintenance; modifying processes or procedures; restricting users; consumptive use; on-demand supply; direct ordering; extending shelf life; regenerating spent material; downgrading and reuse of spent material; use of waste as raw material in other manufacturing and combinations of those factors. Alternatives are to be analyzed in a could-cost approach, considering what the lowest amount the decision could cost by overcoming barriers to getting the job done, while ensuring protection of human health and the environment (AFI 32-7080, Attachment 1).
- **Authorized Users List (AUL)** - a list maintained by the hazardous materials pharmacy office (HAZMART) showing all installation-level work areas authorized to use hazardous materials (HAZMAT) (AFI 32-7086, Attachment 1) [Added December 1997].

- *Baseline* - Quantified starting points from which progress is measured. For the purposes of this instruction, baselines are quantities of material purchased or generated over a specified period of time (AFI 32-7080, Attachment 1).
- *Compliance Agreement* - a formal agreement between an installation and a regulatory agency for correcting noncompliance. Such agreements usually define the actions to complete and the schedule for completing them (AFI 32-7047, Attachment 1).
- *Cost Factors* - The expense and cost avoidance associated with hazardous materials that may be reduced to monetary terms, which includes future liability. Cost factors refer to direct and indirect costs attributable to hazardous materials that are encountered in operations such as acquisition, manufacture, supply use, storage inventory control, treatment, recycling, emission control, training, workplace safety, labeling, hazard assessments, engineering controls, personal protective equipment, medical monitoring, regulatory overhead, spill contingency, disposal, remedial action, and liability (AFI 32-7080, Attachment 1).
- *Data Field* - the smallest element (numeric or alphanumeric) of data in the Defense Environmental Security Corporate Information Management (DESCIM) Program-approved HAZMAT tracking system; it has a finite length and number of characters (AFI 32-7086, Attachment 1). **[Added December 1997]**
- *Disposal* - any authorized method of divesting the Air Force of control of and responsibility for real property. Includes fee conveyance and interagency transfers or other disposition (AFI 32-7066, Attachment 1).
- *Economic Analysis* - An evaluation of the costs associated with the use of hazardous materials and potential alternatives. An economic analysis is not a specific, step-by-step procedure that can be applied by rote to all cases of analyzing whether to use a hazardous material. Rather, organizations shall be guided by basic principles of economics and informed judgment (AFI 32-7080, Attachment 1).
- *Enforcement Action* - any written notice from Federal, state, district, county, or municipal regulatory agency indicating one or more violations of environmental statutes or regulations including, but not limited to, warning letters, notices of violation or noncompliance, administrative orders, and consent order (AFI 32-7047, Attachment 1).
- *Environmental Impact Analysis Process (EIAP)* - the Air Force program that implements the requirements of *National Environmental Policy Act* (NEPA) and requirements for analysis of environmental effects abroad under EO 12114 (AFI 32-7061, Attachment 1).
- *Environmentally Preferable* - Products or services that are less harmful to human health and the environment to use, reuse, operate and maintain, and dispose of in comparison with competing products or services of equal value (AFI 32-7080, Attachment 1).
- *Environmentally Preferable* - products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service (DODI 4715.4, Enclosure 3).
- *Environmental Quality Classes* - this includes the following designations (DODI 4715.4, Enclosure 3):
 1. Class 0 - includes activities needed to cover the recurring administrative, personnel, and other costs associated with managing environmental programs that are necessary to meet applicable compliance requirements (Federal, state, and local laws, regulations, EOs, DOD policies) or which are in direct support of the military mission. Also includes environmental management activities associated with the operation of facilities, installations, and deployed weapon systems. Recurring costs consist of manpower training, supplies, hazardous waste disposal, operating recycling activities, permits, fees, testing and monitoring and/or sampling and analysis, reporting and recordkeeping (i.e., TRI reporting), maintenance of environmental equipment, and compliance self-assessments.

2. Class I - projects and activities needed that are currently out of compliance (have received an enforcement action from a duly authorized Federal, state, or local authority; have a signed compliance agreement or received a consent order; and/or have not met requirements based on applicable Federal, state, and local laws, regulations, EOs, and DOD policies). This class includes projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable requirements but deadlines have not passed or requirements are not in force) but shall be if projects or activities are not implemented within that current program year. Those activities include the preparation of plans (e.g., NEPA), documentation, master plans, emergency response plans, integrated natural and cultural resource management plans, pollution prevention plans; etc., opportunity assessments and inventories. The preferred approach is to use pollution prevention projects or activities, if cost effective, to bring a facility into compliance.
 3. Class III - Projects and activities that are not currently out of compliance (deadlines or requirements have been established by applicable Federal, state, and local laws, regulations, EOs, DOD policies, but deadlines have not passed or requirements are not in force), but shall be if projects or activities are not implemented in time to meet an established deadline beyond the current program year. The preferred approach is to use pollution prevention projects or activities, if cost effective, as the measure of maintaining or bringing a facility into compliance.
 4. Class III - includes projects and activities that are not explicitly required by law but are needed to address overall environmental goals and objectives.
- *Hazardous Material (HAZMAT)* - any item or class of items referenced in Federal Standard 313, paragraph 3.2, and all Class I and Class II ozone-depleting substances (ODS) (AFI 32-7086, Attachment 1) [Added December 1997].
 - *Hazardous Materials* - Any substance or material that poses a threat to human health or the environment typically due to their toxic, corrosive, ignitable, explosive, or chemically reactive nature. More specific definitions may be found in various Federal regulations which implement statutes (i.e., *Hazardous Material Transportation Act*, CERCLA) (AFI 32-7080, Attachment 1).
 - *Hazardous Waste* - Any waste by-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed; possess at least one of five characteristics (toxic, corrosive, ignitable, explosive, or chemically reactive) or are listed in 40 CFR 261.3 or applicable state or local waste management regulations (AFI 32-7080, Attachment 1).
 - *HAZMART* - the facility on an AF installation where LG personnel stock, store, issue, and distribute HAZMAT using the standard base supply system. (AFI 32-7086, Attachment 1).
 - *Interagency Transfer* - transfer of Federal government property accountability to or from other Federal government agencies (AFI 32-7066, Attachment 1).
 - *Life-Cycle Costs* - An evaluation of the costs associated with the use of hazardous materials and potential alternatives over the life of the investment or hazardous material. The analysis is not a specific, step-by-step procedure that can be applied by rote to all cases. Analysis shall be guided by basic principles of economics and informed judgment (AFI 32-7080, Attachment 1).
 - *Life-Cycle of Hazardous Material* - The period starting when the use or potential use of hazardous material is first encountered and extending as long as the actual material or its after effects, such as a discarded residual in a landfill, have a bearing on cost. In the case of weapon system acquisition, the life-cycle starts when the system is first envisioned. Effects of the use of hazardous material on later operations and maintenance are to be considered. This also holds true for a new use of a hazardous material. Where the hazardous material is already in general use, the life-cycle starts when the material is first encountered by any organization that must deal with it (AFI 32-7080, Attachment 1).
 - *Municipal Solid Waste (MSW)* - wastes generated by administrative and domestic activities. MSW does not include hazardous wastes (AFI 32-7080, Attachment 1).

- *Opportunity Assessment* - A systematic procedure to identify and assess ways to prevent pollution by reducing or eliminating wastes (AFI 32-7080, Attachment 1).
- *Outgrant* - a temporary grant of an interest in or right to use Air Force real property by means of either a lease, license, easement, or permit (AFI 32-7066, Attachment 1).
- *Ozone-Depleting Chemicals (ODCs)* - chlorofluorocarbons (CFC), halons, and other substances that deplete the stratospheric ozone layer as classified by the *Clean Air Act* Amendment of 1990 (CAAA90) (AFI 32-7080, Attachment 1).
- *Ozone-Depleting Substance (ODS)* - Class I and Class I ODS as defined by the Montreal Protocol on Substances that Deplete the Ozone Layer (AFI 32-7086, Attachment 1) [**Added December 1997**].
- *Pollution Prevention* - All the actions necessary, to include use of processes, practices, products, or management actions that eliminate or reduce undesirable impacts on human health and the environment. These actions are a hierarchy of source reduction, recycling, treatment, and disposal or means source reduction and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other natural resources, and the protection of natural resources (AFI 32-7080, Attachment 1).
- *Pollution Prevention* - "pollution prevention" means "source reduction" as defined in the *Pollution Prevention Act (PPA)* of 1990, 42 USC, Sections 13101-13109, and other practices that reduce or eliminate the creation of pollutants through (DODI 4715.4, Enclosure 3):
 1. increased efficiency in the use of raw materials, energy, waste, or other resources
 2. protection of natural resources by conservation.
- *Range Classifications* - ranges are classified as follows (AFI 13-212, Volume I, Attachment 1):
 1. Class A. This range is manned, has a scoring capability from the ground, and has a Range Control Officer on the ground who controls aircraft using the range. An air combat maneuvering instrumentation (ACMI) system range is also considered a class A range.
 2. Class B. This range is either manned or unmanned and has a scoring capability from the ground but does not have a Range Control Officer on the ground at the range controlling aircraft. The Range Control Officer function may be performed by the flight lead, forward air controller, or other person as briefed.
 3. Class C. This range is unmanned with no scoring or aircraft control from the ground. The Range Control Officer's function may be performed by the flight lead, forward air controller, or other person as briefed.
- *Real Property* - land and fixtures and other improvements affixed thereto (AFI 32-7066, Attachment 1).
- *Recycling* - The use, reclamation, and reuse of a material. Use/reuse includes return of the recovered waste to the original process or when the waste is substituted for a raw material in another process. Waste reclamation includes processing of residual waste to recover a useful product and generation of waste material (AFI 32-7080, Attachment 1).
- *Source Reduction* - Any practice which reduces or eliminates any hazardous substance, pollutant, or contaminant entering any waste stream, or otherwise, residual waste generation at the source, usually within the generation process. The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, feedstock substitutions, improvements in feedstock purity, shipping and packaging modifications, improvements in housekeeping, maintenance, training, and management practices, increases in machinery efficiency, and recycling within a process (AFI 32-7080, Attachment 1).
- *Source Reduction* - as defined in the PPA, source reduction is any practice that (DODI 4715.4, Enclosure 3):
 1. reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, and disposal

2. reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term includes equipment or technology modification, process or procedure modification, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. Source reduction does not entail any form of waste management (e.g., recycling and treatment).

- *Sources of Supply (SOS)* - includes all AF-controlled supply organizations and other SOS operating on an installation. Other SOS include, but are not limited to, contractor-operated civil engineer supply store, government-operated civil engineer supply store, base maintenance contractors, contractor-operated parts store, and nonappropriated funds (AFI 32-7086, Attachment 1) **[Added December 1997]**.
- *User* - anyone or any organization utilizing hazardous material in the performance of their AF mission (AFI 32-7086, Attachment 1) **[Added December 1997]**.
- *Waste Minimization* - source reduction and the following types of recycling (DODI 4715.4, Enclosure 3):
 1. beneficial use/reuse
 2. reclamation.Waste minimization does not include recycling activities whose uses constitute disposal and burning for energy recovery.
- *Waste Minimization* - The reduction of the quantity or toxicity of a residual waste that is generated and subsequently processed, stored, or disposed, its reduction minimizes present and future threats to human health and the environment (AFI 32-7066, Attachment 1).
- *Work Area* - a definable location where work is performed. This can be outdoors (e.g., an aircraft trim pad) or indoors (e.g., a welding shop). Work areas may be administrative or industrial. Synonymous with "work center" (AFI 32-7086, Attachment 1) **[Added December 1997]**.

G. Additional Records To Review

- Installation Master Plan Document
- Compliance log from local community
- A-106 Report
- Inventory records
- Supply/distribution procedures
- Opportunity assessments
- Baseline records
- Pollution Prevention Management Plan
- Stormwater Pollution Prevention Plan
- Records of any waste reduction/pollution prevention programs
- Records of resource recovery practices including the sale of materials for the purpose of recycling
- Equipment maintenance and inspection records
- Records of waste recovery equipment (i.e., solvent distillation equipment)
- Plans and procedures applicable to air pollution control
- Air emission inventories
- National Pollutant Discharge Elimination System (NPDES) discharge monitoring reports
- WIMS Cleanup Modules
- Programming Design and Construction System.

H. Additional Physical Features To Inspect

- Power generating or other energy source
- Emergency generators

- Shop activities
- Hazardous materials and wastes storage areas
- Firefighting equipment
- Vehicle maintenance areas/motor pool
- Supply area
- Waste recovery areas
- Reuse facility
- Volatile organic compound (VOC) sources
- Recycling area.

I. People To Interview

- Base Civil Engineering (Environmental Planning)
- Deputy for Operations (Air Space Manager)
- Public Affairs Office (PAO)
- Range Operating Agency
- Defense Reutilization and Marketing Office (DRMO)
- On-Scene Coordinator (OSC) or Remedial Project Manager (OSC/RPM)
- Engineering Programmer (DEP)
- Base Environmental Coordinator
- Judge Advocate
- Accumulation Point Managers/Operators
- Bioenvironmental Engineering Services
- Chief of Maintenance
- Environmental Manager
- Hazardous Waste Generating Activities
- Supply Officer
- Installation Ground Safety Manager

J. Guidance for Air Force Supplement Other Environmental Issues Checklist Users

	REFER TO CHECKLIST ITEMS:
Environmental Impacts Analysis Process (EIAP)	
All Installations	O1.1.1 through O1.1.15
Missing Checklist Items	O1.2.1
Environmental Noise	
All Installations	O2.1.1
AICUZ	O2.2.1 through O2.2.4
Noise Awareness	O2.3.1 and O2.3.2
Installation Restoration Program (IRP)	
All Installations	O3.1.1 through O3.1.10
Missing Checklist Items	O3.2.1
Pollution Prevention	
All Installations	O4.1.1 and O4.1.2
Missing Checklist Items	O4.2.1
P ² Plans and Programs	O4.5.1 through O4.5.3
Ozone-Depleting Chemicals (ODCs)	O4.9.1 through O4.9.13
Materials and Waste Management	O4.11.1 through O4.11.6
Hazardous Materials Pharmacies	O4.17.1 through O4.17.11
Solid Waste	O4.20.1 through O4.20.4
Air Emissions	O4.25.1
Program Management	
All Installations	O5.1.1
Missing Checklist Items	O5.2.1
Weapons Ranges	O5.5.1
A-106 Pollution Abatement Plan	O5.10.1
Environmental Baseline Survey (EBS)	O5.15.1 through O5.15.5
Compliance Tracking and Reporting	O5.20.1 and O5.20.2
The EPC	O5.25.1
WIMS-ES Management	O5.30.1

Appendix 6-1, *Categorical Exclusions (CATEXs)*.

Appendix 6-2, *USEPA Industrial ITP Targeted Chemicals*.

Appendix 6-3, *ODCs Subject to Air Force Policy Letter, 7 January 1993*.

Appendix 6-4, *ODCs and ODSs*.

Appendix 6-5, *Format for the EBS Report*.

Appendix 6-6, *Guidance for A-106 Compliance*.

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<p>ENVIRONMENTAL IMPACT ANALYSIS PROCESS (EIAP)</p> <p>O1.1 All Installations</p> <p>O1.1.1. Copies of all relevant Federal, state, and local regulations on the EIAP process should be maintained at the installation (MP).</p> <p>O1.1.2. Installations are required to have an EPF which is an interdisciplinary staff, at any level of command, which is responsible for the EIAP (AFI 32-7061, para 1.3.4).</p>	<p>Verify that the following regulations are maintained:</p> <ul style="list-style-type: none"> - 40 CFR 1500 - 1508, <i>Regulations for the Implementation of NEPA.</i> - AFI 32-7061, <i>The Environmental Impact Analysis Process.</i> - Air Force Policy Letter 2 November 1993, <i>Federal Register Publication Information.</i> - Air Force Policy Letter 3 January 1994, <i>Environmental Impact Analysis Process (EIAP) and Related Compliance Documents.</i> - Air Force Policy Letter 26 August 1994, <i>MAJCOM EPC Coordination of EIAP Documents.</i> - applicable state and local regulations. <p>Verify that the Installation Staff Judge Advocate reviews the documents annually for currency and completeness and submits the findings of the review to the installation EPC.</p> <p>Determine who at the installation participates in the EPF.</p> <p>Verify that the EPF:</p> <ul style="list-style-type: none"> - assists the proponent in preparing a DOPAA - evaluates proposed actions and completes Sections II and III of AF Form 813, <i>Request for Environmental Impact Analysis</i>, subsequent to submissions by the proponent and makes CATEx determinations - identifies and documents, with technical advice from the BEE and other staff members, environmental quality standards that relate to the action under evaluation - prepares environmental documents, or obtains technical assistance through the Air Force channels or contract support, and adopts the documents as official Air Force papers when completed and approved - ensures the EIAP is conducted on the installation and MAJCOM-level plans, including contingency plans for the training, movement, and operation of Air Force personnel and equipment - prepares NOI to prepare an EIS with assistance from the proponent and the PAO - prepares applicable portions of Certificates of Compliance for each military construction project according to AFI 32-1021.

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<p>01.1.3. Each office, unit, or activity at any level that initiates Air Force actions (the proponent) is responsible to perform specific functions in the EIAP process (AFI 32-7061, para 1.3.5).</p> <p>01.1.4. The SJA, PAO, BEE, and Safety Office are required to perform specific functions in the EIAP process (AFI 32-7061, para 1.3.7 through 1.3.10).</p>	<p>Verify that the EPF responsible official signs the AF Form 813 certification.</p> <p>Verify that the proponent of an activity does the following:</p> <ul style="list-style-type: none"> - notifies the EPF of pending actions and completes Section I of AF Form 813, including a DOPAA for submittal to the EPF - identifies key decision points and coordinates the EPF on EIAP phasing to ensure that environmental documents are available to the decision maker before the final decision is made and activities associated with the proposal are not implemented until the EIAP is complete - integrates the EIAP into the planning stage of a proposed program or action and, with the EPF, determines as early as possible whether to prepare an EIS - presents the DOPAA to the EPC for review and comment - coordinates with the EPF prior to organizing public or interagency meetings which deal with EIAP elements of a proposed action and involve persons or agencies outside the Air Force - assists the EPF and PAO in preparing a draft NOI when a decision is made to prepare an EIS. <p>Verify that the SJA does the following:</p> <ul style="list-style-type: none"> - advises the command level proponent EPF and EPC on CATEX determination and the legal sufficiency of environmental documents - advises the EPF during the scoping process of issues that should be addressed in EISs and on procedures for the conduct of public hearings - coordinates the appointment of the independent hearing officer with AFLSA/JAJT (or NGB/JA) and provides support for the hearing officer in cases of public hearings on the draft EIS - refers all matters causing or likely to cause substantial public controversy or litigation through channels to AFLSA/JACE (or NGB-JA). <p>Verify that the PAO:</p> <ul style="list-style-type: none"> - advises the EPF, the EPC, and proponents on public affairs implications of proposed actions and review environmental documents for public affairs issues - advises the EPF during the scoping process of issues that should be addressed in the EIS - prepares, coordinates, and distributes news releases related to the proposal and associated EIAP documents - notifies the media and purchases advertisements when newspapers will not run the notices free of charge. <p>Verify that, as a representative of Medical Services, the BEE provides technical</p>

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<p>O1.1.5. The EPC is required to perform specific activities during the EIAP (AFI 32-7061, para 1.3.6).</p> <p>O1.1.6. Specific types of EAs are required to be forwarded to SAF/MIQ for approval (AFI 32-7061, para 3.3.7).</p> <p>O1.1.7. FONSI's resulting from an EA are required to include specific information (AFI 32-7061, para 3.4.1 through 3.4.2).</p>	<p>assistance to EPFs in the areas of environmental health standards, effects, and monitoring capabilities.</p> <p>Verify that the Safety Office provides technical assistance to EPFs to ensure consideration of safety standards and requirements.</p> <p>Verify that the EPC request formal staffing of a CATEX as necessary by interviewing EPC members.</p> <p>Verify that the EPC reviews and coordinates DOPAA's prepared by the proponent and environmental documents prepared by the EPF.</p> <p>Verify that the following types of EAs are forwarded to SAF/MIQ through HQ USAF/CEV (a copy to AFCEE/EC for technical review), along with an unsigned FONSI:</p> <ul style="list-style-type: none"> - EAs for actions where the Air Force has wetlands or floodplains compliance responsibility - system acquisition EAs - all EAs on non-Air Force agency proposals that require an Air Force decision, such as use of Air force property for highways and joint-use proposals - EAs for actions that require the Air Force to make conformity determinations pursuant to the CAAA90 - EAs where mitigation to insignificance is accomplished instead of initiating an EIS. <p>(NOTE: See Appendix 6-1 for a list of CATEXs.)</p> <p>Verify that the FONSI summarizes the EA or has the EA attached to it and incorporated by reference.</p> <p>Verify that, if the EA is not attached, the FONSI includes:</p> <ul style="list-style-type: none"> - the name of the action - a brief description of the action including alternatives considered and the chosen alternative - a brief discussion of anticipated environmental effects - conclusions leading to the FONSI - all mitigation actions that will be adopted. <p>(NOTE: The overall purpose of the FONSI is to briefly describe why an action would not have a significant effect on the environment and therefore an EIS is not</p>

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<p>O1.1.8. Draft FONSIs are required to be made available for public review in specific circumstances (AFI 32-7061, para 3.4.5) [June 1997].</p> <p>O1.1.9. The EPF is required to distribute NOIs (AFI 32-7061, para 3.6).</p> <p>O1.1.10. The EPF is required to distribute copies of the preliminary draft EIS for review (AFI 32-7061, para 3.8.1).</p> <p>O1.1.11. The EPF is required to send meeting plans for scoping meetings to AF/CEV (or ANGRC) for SAF/MIQ concurrence (AFI 32-7061, para 3.7).</p> <p>O1.1.12. For each FONSI and record of decision (ROD)</p>	<p>required.)</p> <p>Verify that, in the following circumstances, the draft FONSI is made available for public review for at least 30 days before a final determination on EIS preparation is made or before FONSI approval and implementing the action:</p> <ul style="list-style-type: none"> - when the proposed action is, or is closely similar to, one that usually requires preparation of an EIS - if it is an unusual case, a new kind of action, or a precedent setting case in terms of its potential environmental impacts - if the proposed action would be located in a floodplain or wetland - if the action is mitigated to insignificance in the FONSI instead of an EIS - if the proposed action is a change to airspace use or designation. <p>Verify that the FONSI is not signed before completion of the public review period.</p> <p>Verify that the proponent on the installation has sent all NOIs to HQ USAF/CEV for review and publication in the Federal Register.</p> <p>Verify that the EPF has provided copies of the NOIs to the appropriate state authorities.</p> <p>Verify that the EPF has sent the NOI to the PAO for publication in the local media.</p> <p>Verify that the EPF provides a sufficient number of the preliminary draft EISs to HQ USAF/CEV for HQ USAF EPC review and AFCEE/EC for technical review.</p> <p>Verify that meeting plans are sent to AF/CEV for concurrence by SAF/MIQ no later than 30 days prior to the first scoping meeting.</p> <p>Verify that the proponent has published a plan specifically identifying how the proponent will execute the mitigations, who will fund and implement the</p>

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<p>containing mitigation measures, the proponent will publish a mitigation plan (AFI 32-7061, para 3.11.4).</p> <p>01.1.13. As a part of the EIAP process, specific documents are required to be submitted to HQ USAF/CEVP (AF Policy letter 3 January 1994).</p> <p>01.1.14. All EIAP documentation has to be coordinated with or approved by the MAJCOM EPC prior to being sent to HQ USAF (Air Force Memorandum 20 August 1994, <i>MAJCOM EPC Coordination of EIAP Documents</i>).</p> <p>01.1.15. FONSI's are required to be signed by the appropriate level of management (AFI 32-7061, para 3.4.6) [April 1997].</p>	<p>mitigations, and when the mitigation will be completed.</p> <p>Verify that the plan is forwarded to HQ USAF/CEV for review within 90-days from the date of signature of the FONSI or ROD.</p> <p>Verify that, if the installation has generated any of the following documents, they have been sent to HQ USAF/CEVP:</p> <ul style="list-style-type: none"> - all draft and final EISs and RODs - Federal Register notices - all draft and final Air Conformity Determinations with supporting documentation - findings of no practicable alternative (FONPAs) - EAs and FONSI's that address: <ul style="list-style-type: none"> - actions requiring the Air Force to make Air Conformity Decisions pursuant to the CAAA90 - actions requiring the Air Force to make FONPAs pursuant to the executive orders on wetlands and floodplains - system acquisitions - proposals by non-Air Force agencies for which the Air Force must make a decision, such as use of Air Force property for highways and joint use proposals. <p>Verify that all EIAP documentation is coordinated with or approved by the MAJCOM EPC prior to being sent to HQ USAF.</p> <p>Verify that FONSI's are signed by the appropriate level of management.</p>

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<p>O1.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>O1.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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ENVIRONMENTAL NOISE O2.1 All Installations O2.1.1. Copies of all relevant Federal, state, and local regulations on environmental noise are required to be maintained at the installation (MP).	<p>(NOTE: Noise requirements pertaining to range planning are covered in Natural Resources Management.)</p> <p>Determine if the following documents are available at the installation:</p> <ul style="list-style-type: none"> - EO 12088, <i>Compliance With Pollution Standards</i>. - AFI 13-201, <i>Air Force Airspace Management</i>. - AFI 32-7063, <i>Air Installation Compatible Use Zone Program</i>. - Air Force Policy Letter 9 July 1993, <i>New Land Use Compatibility Policy for Shopping Malls and Shopping Centers for the AICUZ Program</i>. - <i>AICUZ Handbook</i>. - applicable state and local regulations. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the EPC informed as needed.</p>

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<p>ENVIRONMENTAL NOISE</p> <p>O2.2 AICUZ</p> <p>O2.2.1. Each installation and auxiliary airfield with an active runway is required to prepare and maintain an AICUZ study (AFI 32-7063, para 3.1, 3.2.6, and AF Policy Letter 9 July 1993) [Revised January 1999].</p>	<p>(NOTE: Under AFI 32-7063 the MAJCOM/CE is assigned responsibility for the AICUZ program. But para 1.3.4.2. stipulates that the MAJCOM/CE may delegate the responsibilities outlined in AFI 32-7063 to the installation. Therefore, prior to assessing this portion of the checklist, determine if the installation has been assigned responsibility for fulfilling these responsibilities and conduct the assessment accordingly.)</p> <p>(NOTE: After technical review, the MAJCOM/CE can approve exemptions where the AICUZ study does not extend beyond installation boundaries or where there are less than 10 jet or 25 propeller-driven aircraft operations on a runway on an average busy day.)</p> <p>Verify that a copy of all exemption correspondence is provided to AFCEE/DG.</p> <p>Verify that volume I of the AICUZ study contains the following:</p> <ul style="list-style-type: none"> - signed and dated transmittal letter - introductions to AICUZ, purpose, need, process, and procedure - installation description (mission, economic impact, and flying activity) - brief description of the basis of the land-use compatibility/incompatibility: <ul style="list-style-type: none"> - accident potential - noise - height restrictions - any additional local considerations - recommendations/guidelines for determining compatible land uses (land-use compatibility tables and text) - land-use analysis <ul style="list-style-type: none"> - existing land use - zoning and any other ongoing implementation action - future land use - incompatible development - maps with appropriate narrative <ul style="list-style-type: none"> - vicinity map - flight tracks map - separate accident potential zones map (optional) - separate noise control map (optional) - composite AICUZ map (combined noise contour and accident potential zone map) - existing off installation land use overlaid on the composite AICUZ map - existing off installation zoning overlaid on the composite AICUZ map - future off installation land use overlaid on the composite AICUZ map - implementation and maintenance responsibilities - installation points of contact. <p>(NOTE: Typically the AICUZ study reflects aircraft operations as currently flown at an installation. But, under certain conditions, in cooperation with local</p>

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<p>O2.2.2. The installation is required to review AICUZ aircraft operational and maintenance data at least every 2 yr, or as a part of the EIAP, and update as necessary (AFI 32-7063, para 1.3.5.1, 1.3.5.3, and 1.3.5.4).</p>	<p>communities and with approval from MAJCOM/CE, preparers may substitute projected contours based on unclassified long range plans for future aircraft operations, for contours reflecting current operations in AICUZ studies.)</p> <p>Verify that volume II of the AICUZ study contains the following:</p> <ul style="list-style-type: none"> - AICUZ concept, program, methodology, and policies - accident potential zones - description of the noise environment - height and obstruction criteria - noise level reduction guidelines - sample population density guidelines. <p>Verify that volume III of the AICUZ study contains the following:</p> <ul style="list-style-type: none"> - AICUZ implementation and maintenance plan (internal use only) - citizens brochure (optional). <p>(NOTE: The AICUZ Handbook, Volume III, contains formats for AICUZ studies as well as AICUZ page insert amendments.)</p> <p>(NOTE: AICUZ study updating is not required if:</p> <ul style="list-style-type: none"> - MAJCOM/CE determines that the specific situation does not require it (MAJCOM/CE informs AFCEE/DG and supplies related documentation) - the local community has adopted the AICUZ study and the applicable zoning ordinances in effect meet the recommended compatible land uses for the reduced or expanded AICUZ (this must be clearly documented).) <p>Determine the date of last AICUZ review or update.</p> <p>Verify that, if the noise exposure for aircraft operations results in a change of Day-Night Average Sound Level (DNL) 2 dB or more as compared to the noise contour map in the last publicly released AICUZ study for any noise sensitive area, updating actions are started.</p> <p>Verify that the following data is kept up to date:</p> <ul style="list-style-type: none"> - aircraft operational data - maintenance data relative to flight line engine runups - maintenance data from engine test cells. <p>(NOTE: Actions such as major operational or maintenance modifications, mission realignments, or mission basings affect the aircraft operational and maintenance data.)</p>

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<p>O2.2.3. The AICUZ study is required to be updated as determined by the MAJCOM/CE (AFI 32-7063, para 3.2).</p>	<p>Determine if the AICUZ study reflects the current aircraft inventory by operations, number, and type, and if it reflects the currently used flight tracks.</p> <p>Determine if the installation has been directed to update the study by the MAJCOM/ CE.</p> <p>Verify that, if required, the AICUZ study has been updated.</p> <p>Verify that the updated AICUZ includes an Installation Commander-signed and dated transmittal letter to the governments and citizens of the local community describing the changes.</p> <p>Verify that the MAJCOM has approved each AICUZ update before it is released to the public.</p>
<p>O2.2.4. Due to litigation requirements, AICUZ data files are required to be retained indefinitely (AFI 32-7063, para 1.3.5.2.3).</p>	<p>Verify that AICUZ documentation files are retained indefinitely by reviewing historical files.</p>

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<p>ENVIRONMENTAL NOISE</p> <p>O2.3 Noise Awareness</p> <p>O2.3.1. A program is required at each applicable installation to distribute information on military training routes, special use airspace, and supersonic areas, or routes (AFI 13-201, para 3.2.2) [Revised June 1998].</p> <p>O2.3.2. Installations are required to follow MAJCOM procedures for researching and responding to noise complaints (AFI 13-201, para 3.3.) [Revised June 1998].</p>	<p>Verify that an explanatory letter has been developed outlining the purpose, routes, areas, altitudes, intensity, day and time of use of the areas or routes, and locations of existing operating areas or routes in the vicinity.</p> <p>Verify that PAO distributes the information in the explanatory letter to community news media and local officials.</p> <p>(NOTE: The information needs to be presented not only to those communities in the immediate vicinity of the facility but also to those communities situated under or near special use airspace (SUA) and/or military training route (MTR).)</p> <p>Verify that copies of the explanatory letter have been sent to airport managers at airports within 20 nautical miles (NM) of MTRs, military operating areas, and restricted areas, and within 40 NM of supersonic operations.</p> <p>Verify that the information has been sent to each interested Native American Tribal Council and/or Reservation, MAJCOM, FAA office, local official, affected Air Force Regional Environmental Office, and AFREP.</p> <p>Determine what the MAJCOM procedures are for researching and responding to noise complaints.</p> <p>Verify that the installation is following the MAJCOM procedures for researching and responding to noise complaints.</p> <p>(NOTE: Review the noise complaint log.)</p>

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INSTALLATION RESTORATION PROGRAM (IRP) O3.1 All Installations O3.1.1. Copies of all relevant Federal, state, and local regulations, on the IRP should be maintained at the installation (MP). O3.1.2. All properties, which due to past activities have the potential for contamination, are required to be evaluated in a systematic and comprehensive manner (HQ USAF/CEV Memorandum, 25 June 1995, <i>1996/ 1997 Air Force Environmental Restoration Program Management Guidance</i>). O3.1.3. Significant decisions in the IRP process (such as taking no further action at a site, selecting a remedial action, implementing long term monitoring, and reactivating IRP work at a previously excluded site) are required to be documented (AFI 32-7020, para 2.2.10)	<p>Determine whether copies of the following regulations and policy letters are maintained and kept current at the installation:</p> <ul style="list-style-type: none"> - 40 CFR 300.810, <i>Contents of the Administrative Record File</i>. - SARA Section 120, <i>Federal Facilities</i>. - SARA Section 211, <i>DOD Environmental Restoration Program</i>. - AFI 32-7020, <i>The Environmental Restoration Program</i>. - HQ USAF/CEV Memorandum, 28 June 1995, <i>1996/1997 Air Force Environmental Restoration Program Management Guidance</i>. - applicable state and local requirements. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the EPC informed as needed.</p> <p>Determine if the installation has had previous spills or actions occur that could lead to possible facility contamination.</p> <p>Verify that actions have been taken to ascertain the extent of contamination.</p> <p>Verify that the MAJCOM has ensured that a designated Air Force decisionmaker signs all decision documentation and distributes it to appropriate organizations.</p> <p>Verify that the Assistant Secretary of the Air Force (Manpower, Reserve Affairs, Installations, and Environment) signs Record of Decision documents for National Priorities List (NPL) sites.</p> <p>(NOTE: This authority has been delegated to the Command Headquarters.)</p> <p>Verify that the Installation Commander or designated representative signs other</p>

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<p>[May 1997].</p> <p>O3.1.4. Each installation which has conducted or is currently conducting IRP activities is required to establish an Administrative Record which contains all the information used by the installation in selection of a response action for each IRP site (AFI 32-7020, para 2.2.14).</p> <p>O3.1.5. Installations are required to screen all IRP requirements for Environmental Restoration Account (ERA) funding eligibility before they are submitted to the MAJCOM (Yearly ERA Eligibility/Programming Guidance, U.S. Air Force) [May 1997].</p> <p>O3.1.6. Each installation will implement community out-reach programs consistent with local community interests and consistent with Air Force community out-reach guidance (SARA Section 211; 10 USC 2705 and HQ USAF/CEV Memorandum, 25 June 1995, 1996/1997 Air Force Environmental</p>	<p>decision documents and No Further Response Action is Planned documentation.</p> <p>Verify that copies were distributed to the regulators, the Directorate of Environmental Quality, Environmental Restoration Division, the appropriate Regional Compliance Office, and if executed at the MAJCOM level, the installation.</p> <p>Verify that all decisions requiring formal documentation are coordinated with public affairs.</p> <p>Determine if the installation maintains an Administrative Record.</p> <p>Verify that the Administrative Record is kept in a location normally frequented or found by the public (such as the Library, Pass and Identification Office, Public Affairs, etc.).</p> <p>Determine if the installation screens their IRP requirements for ERA funding eligibility, using the yearly ERA Eligibility/Programming Guidance.</p> <p>(NOTE: Evidence of this screening will be in the site folder with the site history.)</p> <p>Determine if the installation has formed and implemented a restoration advisory board.</p> <p>Determine if the committee includes representatives from the USEPA, state and local regulatory agencies, and the public.</p> <p>(NOTE: Suggested local community representatives include college professors in technical fields.)</p>

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<p><i>Restoration Program Management Guidance).</i></p> <p>O3.1.7. Installations with IRP sites are required to appoint a remedial project manager (EO 12580; <i>National Contingency Plan</i>).</p> <p>O3.1.8. Each installation is required to maintain copies of agreements with Regulatory Agencies (<i>Yearly DERA Eligibility and Programming Guidance</i>).</p> <p>O3.1.9. Each installation is required to establish a Community Relations Plan (HQ USAF/CEV Memorandum, 25 June 1995, 1996/1997 <i>Air Force Environmental Restoration Program Management Guidance</i>).</p> <p>O3.1.10. Each installation is required to develop and maintain a Management Action Plan (MAP) (<i>Yearly DERA Eligibility and Programming Guidance and AFI 32-7020, para 2.2.11</i>).</p>	<p>Determine if the Installation's Commander has appointed a remedial project manager for all IRP sites.</p> <p>Determine if the installation has a Federal Facilities Agreement, Federal Facility Compliance Agreement, Consent Orders, Consent Decree, or RCRA Permit.</p> <p>Determine if the facility has entered into any other agreement with regulatory agencies with binding schedules.</p> <p>Verify that copies of all such documents are easily located by CEV personnel.</p> <p>Verify that schedules outlined in these documents are being met by the installation.</p> <p>Determine if the installation has developed a formal written plan and submitted copies of the plan to HQ USAF/ILEV and HQ ACC/ILEV.</p> <p>Verify that the installation conducts open meetings for the public.</p> <p>Determine if the installation has developed a MAP.</p> <p>Verify that the MAP contains the following:</p> <ul style="list-style-type: none"> - a Community Disposal and Reuse Plan - the Installation wide Environmental Program Status - the Installation wide Strategy for Environmental Restoration - the Environmental Restoration/Compliance Program Master Schedule - the Budget for Restoration. <p>Verify that the MAP schedules are updated every 6 mo.</p> <p>Verify that the MAP is reviewed yearly and revised accordingly.</p>

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O3.2 MISSING CHECKLIST ITEMS O3.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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	<p>Verify that the HMMP team provides oversight for the following:</p> <ul style="list-style-type: none"> - the HAZMAT Pharmacy Program (HPP) - the weapon system Hazardous Materials Reduction Prioritization Process (HMRPP) - the ODS Management Program. <p>Verify that the installation HMMP team:</p> <ul style="list-style-type: none"> - provides the necessary teamwork, oversight, coordination, and crossfeed to implement the HMMP - ensures all functional areas provide resource advocacy in their respective areas for an effective interface between their functional area program and the HMMP - reviews and validates HMMP-related funding requirements - integrates HMMP requirements into host-tenant agreements as needed according to AFI 25-201 - ensures HMMP training requirements are met according to AFI 32-87, applicable AFOSH and OSHA standards, and local requirements to maximize training efficiency - coordinates installation-level responsibilities under the Air Force Weapon System Hazardous Materials Reduction Prioritization Process per AFI 32-7086.

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<p>O4.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>O4.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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<p>POLLUTION PREVENTION</p> <p>O4.5 P² Plans and Programs</p> <p>O4.5.1. Installations are required to conduct Opportunity Assessments to review waste generating activities and the installation waste streams (AFI 32-7080 2.2.1).</p> <p>O4.5.2. Installations are required to develop and execute a Pollution Prevention Management Plan (PPMP) (AFI 32-7080, para 2.2 and DODI 4715.4, para F2(c)(2)) [December 1996].</p>	<p>Verify that an Opportunity Assessment of each waste generating activity is conducted on a recurring basis.</p> <p>Verify that the Opportunity Assessment provides a systematic review of the waste generating activities and installation waste streams.</p> <p>Verify that the Opportunity Assessment examines the total waste generation by type and volume of content and determines the most economical and practical waste minimization option.</p> <p>Verify that consideration is given to cost/benefit analysis when evaluating options.</p> <p>Determine if the installation has a PPMP.</p> <p>Verify that the plan addresses all of the following issues:</p> <ul style="list-style-type: none"> - the process required to run a pollution prevention program - the program required to fund pollution prevention projects - the road map to achieve Air Force pollution prevention goals - the actions required to execute the program. <p>Verify that the plan contains management strategies for the following areas:</p> <ul style="list-style-type: none"> - ODCs - USEPA 17 industrial toxics (see Appendix 6-2) - hazardous wastes - municipal solid waste - affirmative procurement of recycled materials - energy conservation - air and water pollution reduction. <p>Verify that the plan identifies and programs projects needed to achieve stated objectives.</p> <p>Verify that the installation maintains and executes pollution prevention plans that identify goals and cost-effective management processes or technologies to eliminate or reduce the use and disposal of hazardous materials.</p>

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O4.5.3. Installations should include additional strategies in the PPMP to further improve the pollution prevention program (MP).	Verify that the plan includes the following information: <ul style="list-style-type: none"> - plans to crossfeed information to the rest of the Air Force - plans to brief the installation EPC - plans to implement Opportunity Assessments - oil/water separator management strategies - usable measures of success - programming and budgeting strategies.

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<p>POLLUTION PREVENTION</p> <p>O4.9 Ozone-Depleting Chemicals (ODCs)</p> <p>O4.9.1. Installations are required to eliminate dependence on ODCs (<i>Air Force Policy on ODCs</i>) [Moved April 1999].</p> <p>O4.9.2. The purchase of specific ODCs is prohibited (AFI 32-7080, para 3.1.1 and 3.1.3 and AFI 32-7086, para 4.8) [Moved April 1999].</p> <p>O4.9.3. Installations are required to eliminate</p>	<p>(NOTE: This was formerly checklist item O4.10.1. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Determine whether the installation uses any of the substances listed in Appendix 6-3.</p> <p>Verify that the installation's dependence on CFCs, halons, and other substances that deplete the stratospheric ozone layer is being reduced.</p> <p>Verify that any new system or modification to an existing system does not include the use of ODCs as a solvent, unless approved by the proper waiver approval authority.</p> <p>(NOTE: This was formerly checklist item O4.10.2. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the substances outlined in Appendix 6-4 are no longer being purchased.</p> <p>Verify that halon fire extinguishing equipment, and ODC air conditioning and refrigeration equipment for ground applications is no longer being purchased.</p> <p>(NOTE: Organizations may apply for waivers prior to the award of any contract which requires the use of a Class I ODC to purchase new or recycled ODCs, or obtain ODCs from the Defense Logistics Agency (DLA) ODC Bank for mission critical applications. Waivers are not required for government use of ODCs currently in stock on Air Force facilities.)</p> <p>Verify that air conditioning, refrigeration, and fire suppression equipment is managed using existing CE Class I ODS stocks (see Appendix 6-4).</p> <p>Verify that all excess facility halons and Class I ODS refrigerants are identified to the MAJCOM and reallocated within the MAJCOM or turned in to the DLA Class I Defense Reserve.</p> <p>(NOTE: This was formerly checklist item O4.10.3. It was moved to facilitate</p>

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<p>purchases of ODCs (<i>Air Force Policy on ODCs</i>) [Moved April 1999].</p> <p>O4.9.4. An ODC Purchases Report will be released quarterly (AFI 7080, para 3.1.4.1) [Moved April 1999].</p> <p>O4.9.5. Installations are required to follow specific requirements during the period of transition away from ODC dependence (<i>Air Force Policy on ODCs</i> and AFI 32-7080, para 3.1.2) [Moved April 1999].</p> <p>O4.9.6. Installations are required to initiate certain ODC replacement programs (<i>Air Force Policy on ODCs</i>) [Moved April 1999].</p>	<p>consistency between TEAM manuals.)</p> <p>Verify that policies and procedures are in place to eliminate purchases of ODCs.</p> <p>Verify that the following are no longer purchased:</p> <ul style="list-style-type: none"> - newly produced halon - halon extinguishers for facilities - facility air conditioning systems, AGE equipment, and other refrigeration and support equipment using ODCs - commercial vehicles with ODC air conditioning equipment - ODC solvents and the equipment/systems/products requiring these solvents for maintenance or operation. <p>(NOTE: This was formerly checklist item O4.10.4. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the ODC Purchases Report (RCS: HAF-CEV(Q)9424) is released through WIMS-ES quarterly to Air Staff within 45 days after the end of each quarter.</p> <p>(NOTE: Reporting is discontinued during emergency conditions.)</p> <p>(NOTE: This was formerly checklist item O4.10.5. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that, when non-ODC substitutes need long research and development lead times, existing uses are converted to ODCs with lower ozone depletion potential as interim substitutes, (i.e., HCFCs).</p> <p>Verify that inventory reserves, after production has been outlawed, are used only to aid a transition from ODCs, not as a substitute for changing to non-ozone depleting practices.</p> <p>Verify that, if reserves are used to extend the service life of ODC dependent equipment, conservation, recovery, and reuse are practiced.</p> <p>(NOTE: This was formerly checklist item O4.10.6. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that halon systems on crash/rescue vehicles are disabled and a phased program is in place to replace them with nonhalon fire fighting agents.</p>

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<p>O4.9.7. Installations are required to follow specific requirements regarding contract writing for the use of ODCs (<i>Air Force Policy on ODCs</i>) [Moved April 1999].</p> <p>O4.9.8. Installations are required to reduce the atmospheric discharge of ODCs (<i>Air Force Policy on ODCs</i>) [Moved April 1999].</p>	<p>Verify that a phased replacement program has been initiated to replace halon in the 150 lb flightline extinguishers.</p> <p>(NOTE: Halon removed from crash/rescue vehicles, or from existing installation stock, may be used to service flightline extinguishers until the phased replacement program is complete.)</p> <p>Verify that existing halon fire extinguishers for facilities are replaced through attrition.</p> <p>Verify that refrigerators and other domestic equipment are replaced at the end of their economic life with non-ODC equipment.</p> <p>(NOTE: Existing airborne cooling systems and subsystems that require ODC refrigerants are considered mission critical.)</p> <p>(NOTE: According to the Air Force Civil Engineer Support Agency (AFCESA) A- <i>Gram</i> published March 1996, the only Halon 1211 extinguishers classified as critical are the 150 lb flight line extinguishers listed in TO 00-25-172 to support parked air craft and those hand held extinguishers on-board large frame aircraft.)</p> <p>(NOTE: This was formerly checklist item O4.10.7. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that contracts awarded after 1 June 1993 do not include a requirement to use ODCs or any requirement that can be met only through the use of ODCs, without approval of the waiver approval authority (AF/LG, AF/CE, or SAF/AQ).</p> <p>(NOTE: This was formerly checklist item O4.10.8. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the discharge of ODCs is reduced to zero as soon as possible.</p> <p>Verify that one of the following is being used to reduce discharges:</p> <ul style="list-style-type: none"> - modify operating, training, and testing practices - implement conservation measures such as: <ul style="list-style-type: none"> - recovery - recycling - reuse - material substitution. <p>Verify that existing halon systems, which discharge to the atmosphere for other than actual fire situations, such as fuel tank inerting systems, are used only in</p>

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<p>O4.9.9. Installations should follow specific procedures for the processing of reclaimed ODCs (MP) [Moved April 1999].</p> <p>O4.9.10. Installations are required to manage halons in existing systems in a specific manner (<i>Air Force Policy on ODCs</i>) [Moved April 1999].</p> <p>O4.9.11. Installations are required to maintain equipment and inventories at a certain level (<i>Air Force Policy on ODCs</i>) [Moved April 1999].</p> <p>O4.9.12. Installations should have a refrigerant management plan (MP) [Moved April 1999].</p> <p>O4.9.13. Installations are required to develop a Halon 1301 Management Plan (ETL</p>	<p>actual combat or during in-flight emergencies.</p> <p>Verify that fire warning systems and operational procedures operate so that there are no false alarms or false discharges.</p> <p>Verify that automatic discharge extinguisher systems in facilities are disabled and placed on manual activation.</p> <p>Verify that all servicing of aircraft halon systems capture the halon for recycling with no atmospheric discharge, other than <i>de minimis</i> amounts.</p> <p>Verify that leaking systems are corrected quickly.</p> <p>(NOTE: This was formerly checklist item O4.10.9. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that processes are in place to ensure that reclaimed and excess ODC halons, refrigerants, and solvents are routed to the DLA Defense Reserve.</p> <p>(NOTE: This was formerly checklist item O4.10.10. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that halons are removed from aircraft being retired from service.</p> <p>Verify that these halons are redeployed or added to the Air Force account at the DLA Defense Reserve.</p> <p>(NOTE: This was formerly checklist item O4.10.11. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that chillers are well maintained and repaired promptly.</p> <p>(NOTE: This was formerly checklist item O4.10.12. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the installation has a plan for managing the use and disposal of refrigerant.</p> <p>(NOTE: This was formerly checklist item O4.10.13. It was moved to facilitate consistency between TEAM manuals.)</p>

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95-1 implementing AFI 32-7080) [Moved April 1999].	<p>(NOTE: This ETL expires 12 May 2000.)</p> <p>Verify that the installation has developed a Halon 1301 Management plan which addresses the following:</p> <ul style="list-style-type: none"> - inventory and categorization - programming removal or replacement. <p>Verify that the plan results in the following:</p> <ul style="list-style-type: none"> - Halon 1301 systems list and categorization table - Halon 1301 removal/replacement schedule - project list - funding bar chart - implementation schedule.

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POLLUTION PREVENTION O4.11 Materials and Waste Management O4.11.1. Installations are required to develop procedures to centrally control the purchase and use of hazardous materials (AFI 32-7080, para 2.4.1) [Moved April 1999] . O4.11.2. Installations are required to participate in the reduction of the USEPA 17 Industrial Toxics (AFI 32-7080, para 3.2) [Moved April 1999] .	<p>(NOTE: This was previously O4.15.1, it was moved to facilitate consistency between all TEAM manuals.)</p> <p>Verify that the purchase of hazardous materials, including ODCs, is under centralized control.</p> <p>Verify that the issuance and distribution of hazardous materials is centrally controlled.</p> <p>Verify that hazardous materials are issued in the smallest quantity necessary to meet the customer's need.</p> <p>(NOTE: This was previously O4.15.2, it was moved to facilitate consistency between all TEAM manuals.)</p> <p>Verify that the installation is working on reducing the use of the following:</p> <ul style="list-style-type: none"> - benzene - cadmium and cadmium compounds - carbon tetrachloride - chloroform - chromium and chromium compounds - cyanide and cyanide compounds - lead and lead compounds - mercury and mercury compounds - methylene chloride - methyl ethyl ketone - methyl isobutyl ketone - nickel and nickel compounds - tetrachloroethylene - toluene - 1,1,1-trichloroethane - trichloroethylene - xylenes. <p>(NOTE: Due to the high levels of certain USEPA 17 Toxics in jet fuel, and the direct link between fuels and flying hours, the Air Force's USEPA 17 reduction</p>

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<p>O4.11.3. Installations are required to work to minimize hazardous waste generation (AFI 32-7080, paras 3.3 and 3.3) [Moved April 1999].</p> <p>O4.11.4. Installations should encourage complete use of hazardous materials (MP) [Moved April 1999].</p> <p>O4.11.5. A Hazardous Materials Purchases Report is required to be released quarterly (AFI 7080, para 3.2.1) [Moved April 1999].</p> <p>O4.11.6. Installations are required to maintain inventory management and control processes that minimize the use of hazardous materials, as appropriate, in the most economical manner (DODI</p>	<p>goals exempt jet fuels.)</p> <p>(NOTE: This was previously O4.15.3, it was moved to facilitate consistency between all TEAM manuals.)</p> <p>Verify that hazardous waste from industrial, maintenance, and cleanup operations are minimized to the most economically practical extent.</p> <p>Verify that installations strive to reduce hazardous waste generation at the source.</p> <p>Verify that alternatives to hazardous materials and processes are used whenever possible.</p> <p>Verify that, when technical orders require the use of many hazardous substances or out-of-date technology, the installation submits an Air Force Technical Order (AFTO) Form 22 to change it if alternative substances/technology are known to exist.</p> <p>(NOTE: This was previously O4.15.4, it was moved to facilitate consistency between all TEAM manuals.)</p> <p>Verify that the installation demonstrates effective hazardous materials reuse capability.</p> <p>(NOTE: This was previously O4.15.5, it was moved to facilitate consistency between all TEAM manuals.)</p> <p>Verify that the Hazardous Materials Purchases Report (RCS: HAF-CEV(Q)9424) is released through WIMS-ES quarterly to Air Staff within 45 days after the end of each quarter.</p> <p>(NOTE: Reporting is discontinued during emergency conditions.)</p> <p>(NOTE: This was previously O4.15.6, it was moved to facilitate consistency between all TEAM manuals.)</p> <p>Verify that installations maintain inventory management and control processes that minimize the use of hazardous materials, as appropriate, in the most economical manner.</p>

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4715.4, para F2(c)(1)) [Moved April 1999].	

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<p>POLLUTION PREVENTION</p> <p>O4.17 Hazardous Materials Pharmacies</p> <p>O4.17.1. The hazardous materials pharmacy program (HPP) is required to be operated according to specific procedures (AFI 32-7086, para 2.3) [Added December 1997].</p>	<p>Verify that the HMMP provides oversight for the HPP implementation.</p> <p>Verify that the HPP has a facility, identified as the HAZMART, where LG personnel stock, store, issue, and distribute HAZMAT using the standard base supply system.</p> <p>Verify that the HPP uses a DESCIM-approved HAZMAT tracking system with terminals in the HAZMART and supporting offices (i.e., EMIS, HMMS, and ENTRAC).</p> <p>Verify that personnel have been trained on the tracking system.</p> <p>Verify that the HPP has a standardized HAZMAT authorization process which includes:</p> <ul style="list-style-type: none"> - work area supervisors initiate a request for HAZMAT using AF Form 3952 - the SG, SE, and CE offices review Part I of each AF Form 3952 and complete Part II - the HAZMART, or other appropriate SOS, issues the requested HAZMAT only after SG, SE, and CE authorization. - authorized requests are entered into the DESCIM-approved HAZMAT tracking system - requesters maintain copies of their completed AF Forms 3952 - the installation maintains a file or files of all completed AF Forms 3952. <p>Determine if participation is 100 percent.</p> <p>Verify that all organizations report purchases of hazardous materials to the pharmacy.</p> <p>(NOTE: The DESCIM-approved HAZMAT tracking system creates an Authorized User List (AUL.)</p> <p>Verify that no procurement or issue actions for HAZMAT occur unless the authorization appears on the AUL.</p> <p>(NOTE: The authorization process does not apply to contractors using HAZMAT while operating on AF installations with HAZMAT obtained from non-AF SOS. However, contractors operating as AF SOS must comply with the requirements of AFI 32-7086, para 2.6.5 (see checklist item O4.17.6.) and must report HAZMAT</p>

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<p>O4.17.2. The installation HMMP team must fulfill specific responsibilities with regard to the HPP (AFI 32-7086, para 2.6.1) [Added December 1997].</p> <p>O4.17.3. CE must fulfill specific responsibilities with respect to the HPP (AFI 32-7086, para 2.6.2) [Added December 1997].</p> <p>O4.17.4. LG must fulfill specific responsibilities with</p>	<p>usage on an AF installation to the installation HAZMART, 2.6.9.2. (see checklist item O4.17.10.)</p> <p>Verify that the installation HMMP team:</p> <ul style="list-style-type: none"> - ensures that all installation-level responsibilities for executing the HPP are met - validates environment-related funding requirements for the HPP in accordance with AFI 32-7001 - reviews and revises the list of HPP-controlled items as needed - ensures that HAZMAT authorizations are issued only if a suitable material reduction or substitution is not feasible and appropriate risk control measures are in place - establishes and implements procedures to minimize, to the maximum extent possible, HAZMAT disposal through recycling, reuse, shelf-life control, etc. - identifies HPP training requirements in accordance with AFI 32-87, applicable AFOSH Standards, and local training requirements to maximize training efficiency - consolidates all DESCIM-approved HAZMAT tracking system requirements. <p>Verify that CE:</p> <ul style="list-style-type: none"> - participates in and leads the HMMP team - ensures that HAZMART facilities are adequate to support the Pharmacy Program - manages the DESCIM-approved HAZMAT tracking system <ul style="list-style-type: none"> - provides LG, SG, SE, and other personnel (as appropriate) with training on and access to the DESCIM-approved HAZMAT tracking system - submits changes and problems with the DESCIM-approved HAZMAT tracking system through appropriate channels - maintains and updates CE-related HAZMAT data fields in the DESCIM-approved HAZMAT tracking system - evaluates AF Forms 3952 for environmental requirements and control options and authorizes requested HAZMAT use as appropriate - ensures HAZMAT movements on the installation are tracked by facility, quantity, and process to support fire safety, disaster response, and environmental tracking requirements - consolidates and submits HMMP team-validated, environment-related HPP requirements into the A-106 system - submits metric information as required by the MAJCOM. <p>Verify that LG designates appropriate personnel to participate in the HMMP team.</p>

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December 1997].	<p>system as required</p> <ul style="list-style-type: none"> – ensure personnel have and receive occupational safety and health training appropriate for their HAZMAT-related duties – manage the receipt, storage, issue, inspection, and distribution of HAZMAT as required – validate that all requests for HAZMAT are authorized – maintain and update the SOS-related HAZMAT data fields on the DESCIM-approved HAZMAT tracking system at intervals set by the installation HMMP team.
<p>04.17.7. SG must fulfill specific responsibilities with respect to the HPP (AFI 32-7086, para 2.6.6) [Added December 1997].</p>	<p>Verify that SG:</p> <ul style="list-style-type: none"> – provides BE participation in the HMMP team as required – utilizes the DESCIM-approved HAZMAT tracking system for tracking and authorization purposes – ensures BE personnel receive training on the DESCIM-approved HAZMAT tracking system – submits required changes for the DESCIM-approved HAZMAT tracking system to the HMMP – provides BE evaluation of AF Forms 3952 for health risks to AF personnel and control options and authorizes requested HAZMAT use as appropriate – ensures that review includes HAZMAT-related work area surveys and the identification of conditions of use – maintains and updates the BE-related HAZMAT data fields on the DESCIM-approved HAZMAT tracking system – reviews HAZMART AUL and usage information to help define requirements for BE process evaluations – prepares and submits appropriate BE environment-related HPP funding requirements through the HMMP team to CE for inclusion in the A-106 system.
<p>04.17.8. SE must fulfill specific responsibilities with respect to the HPP (AFI 32-7086, para 2.6.7) [Added December 1997].</p>	<p>Verify that SE:</p> <ul style="list-style-type: none"> – participates in the HMMP team – utilizes the DESCIM-approved HAZMAT tracking system for tracking and authorization purposes – ensures that SE personnel receive training on the DESCIM-approved HAZMAT tracking system – submits required changes for the DESCIM-approved HAZMAT tracking system to the HMMP team – advises HAZMART facilities on compliance with all applicable OSHA, AFOSH, and local standards – evaluates AF Forms 3952 for occupational safety risk and control options and authorizes requested HAZMAT use as appropriate – ensures that the following are included in reviews:

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<p>04.17.9. Work area supervisors must fulfill specific responsibilities with respect to the HPP (AFI 32-7086, para 2.6.8) [Added December 1997].</p>	<ul style="list-style-type: none"> - HAZMAT-related work area safety surveys - identification of conditions of use and worker occupational safety training - identification of processes that require occupational safety analysis - maintains and updates SE-related HAZMAT data fields on the DESCIM-approved HAZMAT tracking system - prepares and submits appropriate SE environment-related HPP funding requirements through the HMMP team to CE for inclusion in the A-106 system. <p>Verify that work area supervisors:</p> <ul style="list-style-type: none"> - participate in the installation HPP - participate in the HMMP team as required - provide safe and healthful work areas - use AF Form 3952 to submit HAZMAT requirements to the HAZMART or other SOS organizations, as appropriate - provide additional information to authorizing offices as requested - comply with all conditions of use identified on AF Form 3952 - notify the HAZMART or other SOS of changes to the conditions or processes described on AF Form 3952 - procure all HAZMAT through the HAZMART or other SOS, as appropriate, using the process described in AFI 32-7086 for tracking, regardless of payment method - provide work area personnel appropriate HAZMAT training - document all appropriate training on AF Form 55 - ensure compliance with Air Force Technical Order (AFTO) requirements for the use of HAZMAT until formally notified of a TO change to requirements - submit requests to eliminate a HAZMAT TO requirement with an AFTO Form 22 to the TO owner - maintain an inventory listing of all HAZMAT used or stored in the work area - maintain only limited quantities of HAZMAT in the work area - turn in excess HAZMAT to the HAZMART or other SOS, as appropriate, as soon as possible for reuse or redistribution. <p>(NOTE: Any change to the conditions or processes described in an AF Form 3952 invalidates the authorization(s) based on it.)</p>
<p>04.17.10. The Contracting Squadron (LGC) must fulfill specific responsibilities with respect to the HPP (AFI 32-7086, para 2.6.9) [Added</p>	<p>Verify that LGC participates in the HMMP team.</p> <p>Verify that, for each contract vehicle involving the use of HAZMAT on the installation, LGC includes a requirement for the contractor to identify and report HAZMAT usage to the HAZMART according to local procedures.</p>

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December 1997].	<p>Verify that, for contractors operating as an SOS, LGC ensures that contract vehicles include proper guidance to comply with requirements for SOS in AFI 32-7086, para 2.6.5, tailored to local needs (see checklist item O4.17.6.).</p> <p>Verify that LGC implements procurement methods as needed to support the HAZMART.</p> <p>Verify that local IMPAC procedures include the requirement that all purchases of HAZMAT using IMPAC require prior approval using the process described in AFI 32-7086, para 2.3.4, and reporting to the HAZMART (see checklist item O4.17.1.).</p>
<p>O4.17.11. The Communications Squadron (CS) must fulfill specific responsibilities related to the HPP (AFI 32-7086, para 2.6.10) [Added December 1997].</p>	<p>Verify that CS:</p> <ul style="list-style-type: none"> – participates in the HMMP team as necessary – validates HAZMAT Communications and Information requirements in compliance with the Global Command Support-AF Strategy – provides assistance to DESCIM HAZMAT personnel in the performance of their Database Administration/System Administration Information System Security Officer duties.

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<p>O4.20.3. Installations are required to actively purchase recycled products (AFI 32-7080, para 3.5).</p> <p>O4.20.4. Installations are required to issue an affirmative procurement purchases report quarterly (AFI 32-7080, para 3.5.4).</p>	<p>Verify that the installation is proactive in the purchasing of all recycled products such as paper, retread tires, building insulation, cement, concrete containing fly ash, and re-refined oils.</p> <p>Verify that the affirmative procurement report (RCS, HAF-CEV(q)9424) is released quarterly via WIMS-ES to the Air Staff within 45 days after the end of each quarter.</p>

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<p>POLLUTION PREVENTION</p> <p>O4.25 Air Emissions</p> <p>O4.25.1. Installations are required to establish and execute a program to reduce the emissions of air pollutants by DOD nontactical vehicles (DODI 4715.4, para F2(e)) [December 1996].</p>	<p>Verify that the installation has established and is executing a program to reduce the emissions of air pollutants by DOD nontactical vehicles through:</p> <ul style="list-style-type: none"> – acquiring alternative fueled vehicles, ensuring that the vehicles meet mission needs – ensuring sufficient supporting infrastructure for alternative fueled vehicles, relying on commercial infrastructure where feasible – planning placement of alternative fueled vehicles to obtain maximum air quality benefits, including CAA credits.

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PROGRAM MANAGEMENT O5.1 All Installations O5.1.1. Copies of all relevant Federal, state, and local regulations on program management should be maintained at the installation (MP) [Revised April 1999].	<p>Determine if the following documents are available at the installation:</p> <ul style="list-style-type: none"> - AFI 13-212, <i>Weapons Ranges</i>. - AFI 32-7001, <i>Environmental Budgeting</i>. - AFI 32-7002, <i>Environmental Management System</i>. - AFI 32-7005, <i>Environmental Protection Committees</i>. - AFI 32-7045, <i>Environmental Compliance and Assessment Management Program</i>. - AFI 32-7047, <i>Compliance Tracking and Reporting</i>. - AFI, 32-7066, <i>Environmental Baseline Survey in Real Estate Transactions</i>. - latest version of the <i>Instruction Kit for Completing USEPA Form 3500-7 for New Pollution Abatement and Prevention Projects</i>. - applicable state and local regulations. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the EPC informed as needed.</p>

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<p>O5.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>O5.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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PROGRAM MANAGEMENT O5.5 Weapons Ranges O5.5.1. Weapons ranges are required to be addressed in plans required by environmental regulations (AFI 13- 212, Volume 1, para 1.10.2.2).	<p>Determine whether the installation has weapons ranges.</p> <p>Verify that the weapons range(s) is/are addressed in the plans required by environmental regulations.</p> <p>(NOTE: Examples of such plans are:</p> <ul style="list-style-type: none"> - the hazardous materials management plan - the hazardous waste management plan - the SPCC plan - the spill contingency plan.)

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PROGRAM MANAGEMENT O5.10 A-106 Pollution Abatement Plan O5.10.1. All installations are required to submit a 5 yr pollution abatement plan (the A-106 report) detailing the actions they plan to take to get into or maintain compliance (AFI 32-7001, para 3.8).	<p>(NOTE: For additional guidance on determining A-106 compliance see Appendix 6- 6.)</p> <p>Obtain a copy of the previous A-106 Pollution Abatement Plan sent to USEPA.</p> <p>Determine if the installation A-106 Pollution Abatement Plan reflects environmental requirements and properly prioritizes each as Operation and Services, Level 1, Level 2, or Level 3.</p> <p>Compare the A-106 Plan with requirements in the Project by Contract Management System (PCMS) and the PDC System.</p> <p>Determine if the A-106 Plan includes all projects involving costs that are necessary to comply with environmental standards.</p> <p>Check to ensure projects resulting from previous ECAMP evaluations or regulatory inspections are included in the A-106 Plan. Management action plans from ECAMP will give projects required to get the installation back in compliance.</p> <p>Determine if the A-106 Plan includes funds required for studies, management, and monitoring associated with the definition and development of corrective measures and necessary equipment to assure compliance with standards.</p> <p>Determine if the installation budgets for the environmental requirements are recorded in the installation A-106 Plan.</p> <p>Compare listings in the A-106 with the PCMS and PDC listings in Civil Engineering.</p> <p>Compare official financial records with obligation/expenditure data reflected in the A-106 system.</p> <p>Determine if current Level 1 and Level 2 requirements are being executed.</p> <p>Check progress code in the A-106 Plan to ensure projects are under construction or work on-going.</p>

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<p>PROGRAM MANAGEMENT</p> <p>O5.15 Environmental Baseline Survey (EBS)</p> <p>O5.15.1. Installations are required to conduct Phase I of an EBS according to specific parameters (AFI 32-7066, para 2.1.1).</p>	<p>(NOTE: The requirement for an EBS applies to all real property within the United States and its territories and possessions which has been identified for acquisition, disposal, outgrant, interagency transfer, or termination of temporary interests of the Air Force and non-Air Force parties. The chairman of the host EPC may waiver the EBS requirement in a written statement that becomes part of the real estate transaction administrative record (AFI 32-7066, para 1.4 and 1.5).)</p> <p>Determine if the installation has conducted or needs to conduct an EBS for any applicable action.</p> <p>Verify that, at a minimum, a comprehensive records search, interview, and a visual site inspection are done in Phase I.</p> <p>Verify that Phase I of the EBS identifies the following to the extent that information is available:</p> <ul style="list-style-type: none"> - potential for present and past site contamination by hazardous substances, petroleum products, and petroleum derivatives - sources of contamination at the installation and on adjacent properties which could migrate to the subject property after disposal or during the term of temporary acquisition or outgrant - on-going response actions or actions that have been taken at the subject property or the property adjacent to it - characterizes contamination by type, quantity, and times when storage, releases into the environment or structures, or disposal took place on the property. <p>Verify that available Air Force, Federal regulatory agency, and state and local government information and records have been reviewed for the following:</p> <ul style="list-style-type: none"> - all existing or completed surveys, inspection reports or other records relevant to the media and contaminants - IRP studies or other documents produced under CERCLA or the <i>Solid Waste Disposal Act</i> (SWDA) - any applicable regulatory agency reports, NOV's, environmental incident reports, or other similar records - aerial photographs that may reflect prior uses of the property - current and discontinued permits pertaining to environmentally regulated activities such as air emissions, wastewater discharges, and hazardous waste management - title deed, other real property records or other available documents to determine prior uses of the subject property which may have involved hazardous substances or otherwise contaminated the property. <p>Verify that, if the following applies, a records review has been done for adjacent</p>

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<p>O5.15.2. A survey report is required to be prepared at the end of a Phase I assessment (AFI 32-7066, para 2.1.2, through 2.1.5).</p>	<p>property:</p> <ul style="list-style-type: none"> - there has been a release of a hazardous substance, petroleum product, or petroleum derivative on the adjacent property - the release is likely to cause or contribute to a release of any hazardous substance or petroleum product on the subject property. <p>Verify that, in the absence of records, samples have been collected to determine drinking water quality, quality of water supply sources, radon levels in high occupancy facilities, the presence of PCBs or PCB-containing equipment for property subject to disposal, and the presence of lead-based paint (LBP) when potential for it exists in housing units.</p> <p>Verify that current and former employees have been interviewed about operations on the property.</p> <p>Verify that the interior and exterior of the property buildings, structures, equipment, pipes, pipelines, or other improvements have been inspected.</p> <p>(NOTE: Additional guidelines for conducting an EBS can be found in the American Society for Testing and Materials (ASTM) standards <i>Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process</i>, ASTM Designation 1527-93 and <i>Standard Practice for Environmental Site Assessments: Transaction Screen Process</i>, ASTM Designation 1528-93.)</p> <p>Verify that the survey report follows the format in Appendix 6-5.</p> <p>(NOTE: If specific media, contaminants, or issues listed in the format do not apply to the subject transaction, then briefly state this in the report.)</p> <p>Verify that the survey report contains one of the following conclusions regarding the presence of hazardous substances or petroleum products or their derivatives for each property or area:</p> <ul style="list-style-type: none"> - Category 1: no storage, releases, or disposal has occurred - Category 2: only storage has occurred - Category 3: contamination below action levels - Category 4: remedial action required and taken - Category 5: remedial or other action underway - Category 6: required response action not implemented - Category 7: further evaluation required. <p>Verify that, for property being disposed of by deed, an accurate recommendation was made to the EBS.</p>

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<p>O5.15.3. If the property requires further evaluation, Phase II of the EBS is required to be conducted according to specific requirements (AFI 32-7066, para 2.2).</p> <p>O5.15.4. Additional actions are required prior to acquisition or out-grant for property that has been identified as contaminated, but the appropriate remedial action has not yet been taken (AFI 32-7066, para 2.3).</p> <p>O5.15.5. Upon the closure of</p>	<p>(NOTE: Recommendations are based on the conclusions and category classifications:</p> <ul style="list-style-type: none"> - Category 1 through 4: proceed with planned transaction - Categories 5 through 6: <ul style="list-style-type: none"> - do not proceed with disposal - do not proceed with an acquisition by deed unless remedial action by the Air Force necessitates the transaction or other unusual circumstances exists. - Category 7: do not proceed with any planned transaction.) <p>(NOTE: In the case of disposals, outgrants, and transfers to another agency, the recommendations should advise that the presence of any lead and copper in drinking water, asbestos, PCBs, radon, or LBP should be disclosed to property recipients.)</p> <p>Verify that the report survey contains a certification regarding the accuracy of the EBS.</p> <p>(NOTE: This applies to properties which have fallen into Category 7.)</p> <p>Verify that additional investigations, as appropriate, are done, including surface, subsurface, and aquifer sampling to identify:</p> <ul style="list-style-type: none"> - contaminants, or sources of contaminants in structures or soil - the presence of surface or groundwater contamination - the type, concentration, and extent of contamination. <p>Verify that an addendum to the Phase I survey report has been prepared which contains the findings, conclusions, recommendations, and certifications of the Phase II investigations.</p> <p>(NOTE: The same category classifications are used as for a Phase I EBS.)</p> <p>Verify that health, safety, and environmental protection experts have analyzed the results of all sampling, investigations, and other available data to determine if there are risks associated with the intended use of the property.</p> <p>Verify that the presence of contamination is disclosed in the transaction documents for outgrants, acquisitions, and interagency transfers.</p> <p>Determine if the installation has closed an outgrant or has any acquisitions that</p>

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an outgrant or the expiration of an acquisition, changes in the environmental condition of the property need to be documented (AFI 32-7066, para. 2.4).	<p>have expired.</p> <p>Verify that the documentation is a supplement to the EBS or the statement of waiver, or the EBS was redone as needed.</p> <p>(NOTE: This documentation becomes part of the real estate transaction administrative record.)</p> <p>Verify that the following are documented:</p> <ul style="list-style-type: none"> – all hazardous substances used or stored at the property during the term of the outgrant or acquisition – all hazardous wastes generated on the property during the term of the outgrant or acquisition, and its disposition.

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<p>PROGRAM MANAGEMENT</p> <p>O5.20 Compliance Tracking and Reporting</p> <p>O5.20.1. Installations are required to use the WIMS-ES to track and report information on all regulatory inspections, enforcement actions, and compliance agreements (AFI 32-7047, para 4 through 7).</p> <p>O5.20.2. Major installations are required to conduct internal ECAMPs at least annually (AFI 32-7045, para 1.1.1., 1.1.2, and 3.1) [Added]</p>	<p>Verify that inspections by regulators are logged in WIMS-ES and released to the MAJCOM Air Staff.</p> <p>Verify that inspection results are submitted through the MAJCOM to HQ USAF promptly.</p> <p>Verify that immediate notification is made to the MAJCOMs and appropriate regional compliance offices for any actual or likely action against the Air Force that involves fines, penalties, media attention, or has offsite impact.</p> <p>(NOTE: Immediate notification is done initially by telephone and then, within 24 h, a report is written describing what is happening (RCS: HAF-CEV(AR)9432).)</p> <p>Verify that, for routine actions, the installation sends, through the MAJCOMs, copies of enforcement actions and all related correspondence to the appropriate regional compliance office within 10 working days after receiving it from a regulator (RCS: HAF-CEV(AR) 8603).</p> <p>Verify that, in the case of enforcement actions, the installation sends to the regional compliance office, through the MAJCOMs, a summary describing the violation and what is being done soon after receiving any enforcement action, and provides updated status reports on enforcement action using WIMS-ES (RCS: HAF-CEV(Q&AR) 9415).</p> <p>Verify that installations send, through the MAJCOMs, a summary report describing compliance agreement milestones, schedule, and completion status to the appropriate regional compliance office soon after the installation signs the agreement.</p> <p>Verify that status updates on compliance agreement are sent to the regional compliance office soon after the end of each calendar quarter (RCS: HAF-CEV(A&AR) 9417).</p> <p>Verify that major installations conduct internal ECAMPs at least annually.</p> <p>(NOTE: Installations are not required to conduct an internal ECAMP in the year an external ECAMP is done.)</p>

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April 1999].	<p>(NOTE: The MAJCOM may determine that no significant environmental activity takes place on an installation or specific support site and choose to exclude it from ECAMP.)</p> <p>Verify that the ECAMP report meets the parameters outlined in Appendix 6-7.</p>

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PROGRAM MANAGEMENT O5.25 The EPC O5.25.1. Installations are required to have an EPC that fulfills specific functions (AFI 32-7005, para 4.3 and 5.5).	<p>Verify that it meets at least quarterly or at the direction of the chairperson.</p> <p>Verify that the EPC reviews and approves environmental impact analyses on proposed actions and forwards them to the decisionmaker.</p> <p>Verify that the EPC ensures that appropriate training and manpower exists to meet environmental responsibilities.</p> <p>Verify that a record of the EPC meetings is prepared within 30 days of the meeting.</p> <p>Verify that minutes and related documents are kept for a minimum of 10 yr.</p> <p>(NOTE: The AFI stipulates that the membership of the EPC will mirror the membership of the USAF EPC membership which includes:</p> <ul style="list-style-type: none"> - the Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MII) and the Assistant Vice Chief of Staff (HQ USAF/CVA) cochair the EPC - Assistant Secretary for Acquisition (SAF/AQ) - Assistant Secretary for Budget (SAF/FM) - The General Counsel (SAF/IG) - The Inspector General (SAF/IG) - Office of Legislative Liaison (SAF/LL) - Office of Public Affairs (SAF/PA) - the Civil Engineer (HQ USAF/CE) is the EPC Executive Secretary - Deputy Chief of Staff (DCS) Logistics (HQ USAF/LG) - Director, Programs and Evaluations (HQ USAF/PE) - DCS Plans and Operations (HQ USAF/XO) - Chief of Safety (HQ USAF/SE) - The Judge Advocate General (HQ USAF/JA) - DCS Personnel (HQ USAF/DP) - Services (HW USAF/MW) - DCS Command, Control, Communications and Computers (HQ USAF/SC) - Surgeon General (HQ USAF/SG) - Chief of Air Force Reserves (HQ USAF/RE) - Director, Air National Guard (NGB/CF) - Director, Air Force Base Conversion Agency (AFBC/DR).)

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PROGRAM MANAGEMENT O5.30 WIMS-ES Management O5.30.1. Program management reporting should be done in the Pollution Prevention Module of WIMS-ES (AFI 32-7002).	<p>Verify that quarterly reports are being added and released.</p> <p>Verify that programming records are being added for projects and O&S expenses.</p> <p>Verify that all modules are running and are accessible to the program managers responsible for each media.</p> <p>Verify that the transaction processing is being done daily.</p> <p>Verify that rejects are being processed.</p> <p>Verify that the installation Variable File reflects the correct address for the installation Environmental Coordinator.</p>

Appendix 6-1

Categorical Exclusions (CATEXs) (AFI 32-7061, para 3.2.1)

1. Procuring routine goods and services.
2. Routine commissary and exchange operations.
3. Routine recreational and welfare activities.
4. Normal personnel, fiscal, or budgeting, and administrative activities and decisions including those involving military and civilian personnel (for example, recruiting, processing, paying, and recordkeeping).
5. Preparing, revising, or adopting regulations, instructions, directives, or guidance documents that do not, themselves, result in an action being taken.
6. Preparing, revising, or adopting regulations, instructions, directives, or guidance documents that implement (without substantial change) the regulations, instructions, directives, or guidance documents from higher headquarters or other Federal agencies with superior subject matter jurisdiction.
7. Continuation of pre-existing actions, where there is no substantial change in existing conditions and where the actions were originally evaluated in accordance with applicable law and regulations.
8. Performing interior and exterior construction within the 5-ft line of a building without changing the land use of the existing building, provided the structure is not eligible for, or listed in, the National Register of Historic Places.
9. Repairing and replacing real property installed equipment.
10. Routine facility maintenance and repair that does not involve disturbing significant quantities of hazardous materials such as asbestos.
11. Actions similar to other actions which have been determined to have an insignificant impact in a similar setting as established in an EIS or an EA, resulting in an FONSI. Application of this CATEX must be documented on AF Form 813, specifically identifying the previous environmental document which provides the basis for this determination.
12. Installing, operating, modifying, and routinely repairing and replacing utility and communications systems, data processing cable, and similar electronic equipment that use existing rights-of-way, easements, distribution systems, or facilities.
13. Installing or modifying airfield operational equipment (such as runway visual range equipment, visual glide path systems, and remote transmitter or receiver facilities) on airfield property usually accessible only to maintenance personnel.
14. Installing on previously developed land, equipment that does not substantially alter land use (i.e., land use of more than 1 acre). This type of installation include outgrants to private lessees. The EPF must document application of this CATEX on AF Form 813.
15. Laying-away or mothballing a production facility or adopting a reduced maintenance level at a closing installation when:
 1. agreement on any required historic preservation effort has been reached with the state historic preservation officer and the Advisory Council on Historic Preservation (ACHP)

2. no degradation in the environmental restoration program will occur.
16. Acquiring land and ingrats (50 acres or less) for activities otherwise subject to CATEX. The EPF must document application of this CATEX on AF Form 813.
17. Transferring land and facilities for which the General Services Administration (GSA) is the action agency. Such transfers are excluded only if there is no change in land use and GSA complies with its NEPA requirements.
18. Transferring administrative control of real property within the Air Force or to another military department or to another Federal agency(s), including returning public domain lands to the Department of the Interior.
19. Grazing easements, leases, licenses, rights of way, and permits to use Air Force controlled property for activities that, if conducted by the Air Force, would be categorically excluded in accordance with this list. The EPF must document the applicable CATEX exclusion on AF Form 813.
20. Converting in-house services to contract services.
21. Routine personnel decreases and increases, including workforce conversion to either on-base contractor operation or to military operation from contractor operation (excluding base closure and realignment actions which are subject to congressional reporting under 10 USC 2687).
22. Routine, temporary movement of personnel, including deployments of personnel on a temporary duty (TDY) basis where existing facilities are used.
23. Personnel reductions resulting from workload adjustments, reduced personnel funding levels, skill imbalances, or other similar causes.
24. Study efforts that involve no commitment of resources other than personnel and funding allocations.
25. The analysis and assessment of the natural environment without altering it (inspections, audits, surveys, investigations). This CATEX includes the granting of any permits necessary for such surveys, provided that the technology or procedure is well understood and there are no adverse environmental impacts anticipated from it. The EPF must document application of this CATEX on AF Form 813.
26. Undertaking specific investigatory activities to support remedial action activities for purposes of cleanup of hazardous spillage or waste sites or contaminated groundwater or soil. These activities include soil borings and sampling, installation and operation of test or monitoring wells. This CATEX applies to studies that assist in determining final cleanup actions when they are conducted in accordance with prior interagency agreements, administrative orders, or work plans previously agreed to by USEPA or state regulators. (NOTE: This CATEX does not apply to selecting remedial action.)
27. Normal or routine basic and applied scientific research confined to the laboratory and in compliance with all applicable safety, environmental and natural resource conservation laws.
28. Routine transporting of hazardous materials and wastes in accordance with applicable Federal, state, interstate, and local laws.
29. Emergency handling and transporting of small quantities of chemical surety material or suspected chemical surety material, whether or no classified as hazardous or toxic wastes, from a discovery site to a permitted storage, treatment, or disposal facility.
30. Immediate responses to the release or discharge of oil or hazardous materials in accordance with an approved Spill Prevention and Response Plan or Spill Contingency Plan or that are otherwise consistent with the

requirements of the National Contingency Plan. Long-term cleanup and remediation activities should be evaluated separately.

31. Relocating a small number of aircraft to an installation with similar aircraft that does not result in an increase of total flying hours or the total number of aircraft operations, a change in flight tracks, or an increase in permanent personnel or logistics support requirements at the receiving installation.
32. Temporary (for less than 30 days) increase in air operations up to 50 percent of the typical installation aircraft operation rate or increases up to 50 operations a day, whichever is greater.
33. Flying activities that comply with the Federal aviation regulations, that are dispersed over a wide area and that do not frequently (more than once a day) pass near the same ground points. (NOTE: This CATEX does not cover regular activity on established routes or within special use airspace).
34. Supersonic flying operations over land above 30,000 ft mean sea level, or over water above 10,000 mean sea level, and more than 15 NM from land.
35. Formal requests to the FAA, or host-nation equivalent agency, to establish or modify special use airspace (for example, restricted areas, warning areas, military operating areas) and military training routes for subsonic operations that have a base altitude of 3000 ft above ground level or higher. The EPF must document this CATEX determination on AF Form 813, which must accompany the request to the Federal Aviation Administration (FAA).
36. Adopting airfield approach, departure, and en route procedures that do not route air traffic over noise-sensitive areas, including residential neighborhoods or cultural, historical, and outdoor recreational areas. The EPF may categorically exclude such air traffic pattern at or greater than 3000 ft aboveground level regardless of underlying land use.
37. Participating in air shows and fly-overs by Air Force aircraft at non-Air Force public events after obtaining FAA coordination and approval.
38. Conducting Air Force open houses and similar events, including air shows, golf tournaments, home shows and the like, where crowds gather at an Air Force installation, so long as crowd and traffic control, etc., have not in the past presented significant safety or environmental impacts.

Appendix 6-2

USEPA Industrial ITP Targeted Chemicals (AFI 32-7080, Attachment 2)

Benzene

Cadmium and compounds

Carbon tetrachloride

Chloroform

Chromium and compounds

Cyanides

Dichloromethane

Lead and compounds

Mercury and compounds

Methyl ethyl ketone

Methyl isobutyl ketone

Nickel and compounds

Tetrachloroethylene

Toluene

Trichloroethane

Trichloroethylene

Xylene(s)

Appendix 6-3

ODCs Subject to Air Force Policy Letter, 7 January 1993

HALONS
Halon 1211, Halon 1301, Halon 1202, and Halon 1011 are used primarily as firefighting agents.
CFCs
CFCs -11, -12, -13, -111, -112, -113, -114, -115, -211, -213, -214, -215, -216, and -217 are used primarily as refrigerants and cleaning solvents.
OTHER CONTROLLED SUBSTANCES
Carbon Tetrachloride and Methyl Chloroform are used primarily as cleaning solvents. Methyl Bromide is used as pesticide and fumigant.

Appendix 6-4

ODCs and ODSs (AFI 32-7080, Attachment 2 and AFI 32-7086, Table 4.1) [Revised December 1997]

Class I ODCs (AFI 32-7080, Attachment 2)

CFC-1₃ - Trichlorofluoromethane (CFC-11)
CF₂C1₂ - Dichlorodifluoromethane (CFC-12)
C₂F₃C1₃ - Trichlorotrifluoroethane (CFC-113)
C₂F₄C1₂ - Dichlorotetrafluoroethane (CFC-114)
C₂F₅C1 - (Mono)chloropentafluoroethane (CFC-115)
CF₂C1Br - Bromochlorodifluoromethane (Halon 1211)
CF₃Br - Bromotrifluoromethane (Halon 1301)
C₂F₄Br₂ - Dibromotetrafluoroethane (Halon 2402)
CF₃C1 - Chlorotrifluoromethane (CFC-13)
C₂FC1₅ - (CFC-111)
C₂F₂C1₄ - (CFC-112)
C₃FC1₇ - (CFC-211)
C₃F₂C1₆ - (CFC-212)
C₃F₃Cl₅ - (CFC-213)
C₃F₄C1₄ - (CFC-214)
C₃F₅C1₃ - (CFC-215)
C₃F₆C1₂ - (CFC-216)
C₃F₇C1 - (CFC-217)
CCl₄ - Tetrachloroethane (Carbon Tetrachloride)
C₂H₃Cl₃-1,1,1-Trichloroethane (methyl chloroform)
CH₃Br - Bromomethane (methyl bromide)

Class I ODSs
(AFI 32-7086, Table 4.1)

CFC-1₃ - Trichlorofluoromethane (CFC-11)
CF₂C1₂ - Dichlorodifluoromethane (CFC-12)
C₂F₃Cl₃ - Trichlorotrifluoroethane (CFC-113)
C₂F₄Cl₂ - Dichlorotetrafluoroethane (CFC-114)
C₂F₅Cl - (Mono)chloropentafluoroethane (CFC-115)
CH₂BrCl - Bromochloromethane (Halon 1011)
CB₂F₂ - Dibromodifluoromethane (Halon 1202)
CF₂C1Br - Bromochlorodifluoromethane (Halon 1211)
CF₃Br - Bromotrifluoromethane (Halon 1301)
C₂F₄Br₂ - Dibromotetrafluoroethane (Halon 2402)
CF₃Cl - Chlorotrifluoromethane (CFC-13)
C₂FC1₅ - (CFC-111)
C₂F₂C1₄ - (CFC-112)
C₃FC1₇ - (CFC-211)
C₃F₂C1₆ - (CFC-212)
C₃F₃Cl₅ - (CFC-213)
C₃F₄C1₄ - (CFC-214)
C₃F₅C1₃ - (CFC-215)
C₃F₆C1₂ - (CFC-216)
C₃F₇C1 - (CFC-217)
CCl₄ - Tetrachloroethane (Carbon Tetrachloride)
C₂H₃Cl3-1,1,1-Trichloroethane (methyl chloroform)
CHCl3 - Tetrachloroethane (all isomers) (Methyl Chloroform)
CH₃Br - Bromomethane (methyl bromide)

Class II ODSs
(AFI 32-7086, Table 4.2)

HCFC -21

HCFC -22

HCFC -31

HCFC -121

HCFC -122

HCFC -123

HCFC -123b

HCFC -124

HCFC -124b

HCFC -131

HCFC -132

HCFC -133

HCFC -141

HCFC -141b

HCFC -142

HCFC -151

HCFC -221

HCFC -222

HCFC -223

HCFC -224

HCFC -225

HCFC -225ca

HCFC -225cb

HCFC -226

HCFC -231

HCFC -232

Class II ODSs
(AFI 32-7086, Table 4.2)

HCFC -233

HCFC -234

HCFC -235

HCFC -241

HCFC -242

HCFC -243

HCFC -244

HCFC -251

HCFC -252

HCFC -253

HCFC -261

HCFC -262

HCFC -271

Appendix 6-5

Format for the EBS Report (AFI 32-7066, Attachment 2)

Executive Summary

Section 1.0: Purpose of the EBS

1.1: Boundaries of the Property and Survey Area (include map)

Section 2.0: Survey Methodology

2.1: Approach and Rationale

2.1.1: Description of Documents Reviewed

2.1.2: Property Inspections

2.1.3: Personal Interviews

2.1.4: Sampling

Section 3.0: Findings for Subject Property

3.1: History and Current Use (including Chain of Title)

3.2: Environmental Setting

3.3: Hazardous Substances and Petroleum Products Management

3.3.1: Hazardous Materials and Petroleum Products

3.3.2: Hazardous and Petroleum Waste

3.4: Installation Restoration Program Contamination

3.5: Storage Tanks

3.5.1: Aboveground Storage Tanks

3.5.2: Underground Storage Tanks

3.5.3: Pipelines, Hydrant Fueling, and Transfer Systems

3.6: Oil/Water Separators

3.7: Pesticides

3.8: Medical/Biohazardous Waste

3.9: Ordnance

- 3.10: Radioactive Wastes
- 3.11: Solid Waste
- 3.12: Groundwater
- 3.13: Wastewater Treatment, Collection, and Discharge
- 3.14: Drinking Water Quality
- 3.15: Asbestos
- 3.16: Polychlorinated Biphenyls
- 3.17: Radon
- 3.18: LBP

Section 4.0: Findings For Adjacent Properties

- 4.1: Land Uses
- 4.2: Surveyed Properties

Section 5.0: Applicable Regulatory/Compliance Issues

- 5.1: List of Compliance Issues
- 5.2: Description of Corrective Actions
- 5.3: Estimates of Various Alternatives

Section 6.0: Conclusions and Recommendations

- 6.1: Facility Matrix
- 6.2: Property Categories Map (if more than one category)
- 6.3: Resources Map
- 6.4: Data Gaps

Section 7.0: Recommendations

Section 8.0: Certifications

Appendix A: Terms

Appendix B: Maps

Appendix C: Aerial and Site Photos

Appendix D: References

Appendix E: Interviews

Appendix 6-6

Guidance for A-106 Compliance

Use the following list of questions to aid in determining whether the A-106 package has been completed correctly.

1. Is **MAJCOM** field correct?
2. Is the **BASE** field filled in?
3. Is the **PROJECT** number correct in accordance with CEV A-106 guidance letter?
4. Does the **MODULE IND** read PREV?
5. Is the **TITLE** one of the standard titles included in the call letter?
6. Is the **Nature of the PROJECT** I, E, or O? If it is E, is it fully justified? If it is O is it an O&S project?
7. Is a **BASE POC** and a **PHONE** listed?
8. Is there an N on screen two?
9. If the **Pgm FY** correct?
10. Does the PA amount match the PPPN?
11. Is the **CWE** entered in? For an initial entry is it the same as the PA amount?
12. Is the **fund type** entered?
13. Is there an N in **Multiple INST**?
14. **PGM Element** for 3400, 3010, or 3020 money should be 78054. For 3600 money it should be 65854.
15. Is **Assessment** left blank?
16. Is the **progress code** only one of the following: (for an initial entry it should be either 1 or 9)
 - 1 = project validated and funded
 - 2 = funds have been obligated
 - 6 = project canceled
 - 9 = all O&S
17. Is **ownership type** and **statutory auth** filled in?
18. Does **design/plan** have a year and month that the project will be RTA? Does it make sense (i.e., to late in the FY or already past)?
19. Is **pollutant category** entered only for O&S projects?
20. **COMPL level** is left blank for O&S. For all other purposes ensure the validated level is entered as follows:
 - Level 1 - ESDP
 - Level 2 = ESDF
 - Level 3 = ESDL

21. **Narrative Screen,** does the narrative match the PPPN and is it complete?

Appendix 6-7

ECAMP Report Format (AFI 32-7045, Attachment 2) [Added April 1999]

Chapter 1. Executive Summary - The executive summary contains background information and a summary of findings, as follows:

- 1.1. Background** - The background contains the minimum essential information, such as date and location of the assessment, identification of the assessment team, and the overall assessment purpose. This section rarely exceeds one page and is needed by a reader who has not been involved with the assessment.
- 1.2. Summary of Findings** - This section includes positive and negative comments, major environmental issues, a summary of compliance status by protocol and the Environmental Compliance Summary Table.

Chapter 2.0. Background and Scope. This section is reserved for information that does not fit into the executive summary or the compliance findings section, but is necessary to make a complete report.

2.1. Background

- a. **ECAMP Objectives.** A statement of the ECAMP objectives as stated in this supplement and individual objectives unique to each specific assessment.
- b. **Installation Description.** Describe the major attributes of the installation.
- c. **Environmental Management System.** Describe in general terms how the installation's environmental management system is structured.

2.2. Scope

- a. **Activity Review.** Describe the base activities that were assessed (this is the appropriate section for positive findings). Comment on the state and local, or host nation regulations that were considered, or used, during the assessment.
- b. **Summary of Assessment Procedures.** A statement that the assessment included a review of documentation, inspection of facilities, and interviews of personnel.

SECTION 7

PESTICIDE MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 32-1053, *Pest Management Program*. This AFI, dated 1 April 1999, provides guidance for pest management at Air Force installations [Revised April 1999].

B. Department of Defense (DOD) Directives and Instructions

- DOD Instruction (DODI) 4150.7, *DOD Pest Management Program*. This DODI, dated 26 April 1996, sets forth the policy, responsibilities, and procedures for pest management programs. This instruction establishes the DOD policy of maintaining safe, efficient, and environmentally sound integrated pest management programs to prevent or control pests that may adversely affect health or damage structures, material, or property. The DOD Plan for the Certification of Pesticide Applicators stipulates the certification of U.S. Air Force military and civilian pest managers. This instruction does not apply to the civil works function of the Army Corps of Engineers nor to state-owned or state-operated (funded) installations or facilities that the National Guard uses part time or full-time.
- DOD Military Handbook 1028/8A, *Design of Pest Management Facilities*. This handbook, dated 1 November 1991, includes the basic criteria to plan and design military installation pest control facilities. The Air Force is instructed to use this document in planning facilities in para 3.4.2.4 of AFI 32- 1053 [Revised April 1999].
- Technical Information Memoranda (TIM). DODI 4150.7 is supplemented by TIM that provide specific criteria and procedures for the operation of a pest management program. The TIMs are guidance only and nonregulatory. The following TIMs are appropriate to have on hand:
 - TIM 11 - Hydrogen Phosphide Fumigation with Aluminum Phosphide (Feb 1987).
 - TIM 13 - *Ultra Low Volume Dispersal of Insecticides by Ground Equipment* (Mar 1985).
 - TIM 14 - *Personal Protective Equipment for Pest Management Personnel* (Mar 1992).
 - TIM 15 - *Pesticide Spill Prevention and Management* (Jun 1992).
 - TIM 16 - *Pesticide Fires: Prevention, Control and Cleanup* (Jun 1981).
 - TIM 18 - *Installation Pest Management Program Guide* (Feb 1987).
 - TIM 20 - *Pest Management Operations in Medical Treatment Facilities* (Oct 1989).
 - TIM 21 - *Pesticide Disposal Guide for Pest Control Shops* (Oct 1986)
 - TIM 24 - *Contingency Pest Management Pocket Guide* (Sep 1991).
 - TIM 25 - *Devices for Electrocution of Flying Insects* (Aug 1988).
 - TIM 26 - *Lyme Disease - Vector Surveillance and Control* (Mar 1990).
 - TIM 27 - *Stored Products Pest Monitoring Techniques* (Jun 1992)
 - TIM 29 - *Integrated Pest Management In and Around Buildings* (Jul 1994)
 - TIM 34 - *Bee Resource Manual* (Aug 1995)
 - TIM 35 - *Termite Inspection Recommendations* (Feb 1996)
 - TIM 36 - *Personal Protective Techniques Against Insects and Other Arthropods of Military Significance* (Jan 1996).
- DOD Directive (DODD) 4715.1, *Environmental Security*. This directive, dated 24 February 1996, established the Armed Force Pest Management Board (AFPMB), consisting of the AFPMB Council and Committee structure, the Directorate, and the Defense Pest Management Information Analysis Center (DPMIAC).

C. Using the TEAM Guide for ECAMP

- No additional instructions.

D. Key Air Force/DOD Compliance Requirements

- Pest Management Plan - Installations are required to develop a comprehensive pesticide management plan which details the pesticide operations on the installation.
- Pesticide Use and Equipment - Installations are required to have Major Command (MAJCOM) approval prior to ordering or using nonstandard, locally purchased pesticides or application equipment. Only trained pest management personnel are allowed to apply general use pesticides. Pesticide applicators are required to participate in a medical surveillance program. Records are required to be kept concerning the storage and application of pesticides.
- Pesticide Storage, Mixing, and Preparation Facilities - Pesticide storage, mixing, and preparation activities must provide facilities and procedures to ensure safety of personnel.
- Highly Toxic Pesticide Storage and Use - Storage facilities for pesticides and excess pesticides classed as highly toxic or moderately toxic that are labeled DANGER, POISON, or with the skull and crossbones symbol, should meet specific structural, operational, and storage requirements. These include pesticides being kept in a dry separate room with fire protection which is not near food or feed, and in containers in good condition with plainly visible labels. There should be decontamination facilities and the local fire department, hospitals, public health officials, and police departments should be notified in writing that the pesticides are being stored (MP).

E. Key Compliance Personnel

- Base Civil Engineering (BCE). The BCE assures that pest management facilities comply with all applicable U.S. Air Force, U.S. Environmental Protection Agency (USEPA), and OSHA regulations and standards; submits quarterly pesticide usage and applicator certification reports (via Work Information Management System (WIMS)); assumes responsibility for the completion of daily records, inspections, requests for additional support, physical examinations, notifications to Director of Base Medical Services (DBMS), the protection of the health and safety of pest management personnel, and the required training and certification or recertification of pesticide applicators. The Pest Management shop within BCE is the principal department charged with proper pesticide management at Air Force installations.
- The DBMS. The DBMS identifies and characterizes pests; recommends measures for personal protection and pest control; monitors pests of medical importance; provides industrial hygiene and environmental sanitation assistance; and assures that pest management personnel are physically qualified to work with pesticides.
- Services/Morale, Welfare, and Recreation (MWR)/Golf Course Maintenance. The Chief of Services assures that the pesticide (including herbicides) storage, mixing, and disposal facilities comply with all applicable regulations and standards. The Chief of Services assures that golf course personnel mixing and applying pesticides are trained and certified. Golf course maintenance submits quarterly pesticide usage reports to the BCE pest management shop for inclusion in the WIMS report.

F. Key Air Force/DOD Compliance Definition

- *Integrated Pest Management (IPM)* - a planned program incorporating continuous monitoring, education, recordkeeping, and communication to prevent pests and disease vectors from causing unacceptable damage to

operations, people, property, materials, or the environment. IPM uses targeted, sustainable (effective, economical, environmentally sound) methods including education, habitat modification, biological control, genetic control, cultural control, mechanical control, physical control, regulatory control, and where necessary, the judicious application of least hazardous pesticides (AFI 32-1053, Attachment 1) **[Revised April 1999]**.

- *Personal Relief* - pest management control efforts made by DOD personnel or their family members at their own expense for control of pests consistent with DOD and Component pest management policy (DODI 4150.7, Enclosure 2).
- *Pests* - arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, or other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable (AFI 32-1053, Attachment 1) **[Revised April 1999]**.
- *Pest Management* - the prevention and control of disease vectors and pests that may adversely affect the DOD mission or military operations; the health and well-being of people; or structure, material, or property (DODI 4150.7, Enclosure 2).
- *Pest Management Consultant* - professional DOD pest management personnel located at Component Headquarters, field operating agencies, MACOMs, facilities engineering field divisions or activities, or area support activities who provide technical and management guidance for the conduct of installation pest management operations. Some pest management consultants may be designated by their Components as certifying officials (DODI 4150.7, Enclosure 2).
- *Pesticide Applicator*: any individual who applies pesticides or supervises the use of pesticides by others (DODI 4150.7, Enclosure 2):
 1. Certified Pesticide Applicator - any individual who applies pesticides or supervises the use of pesticides, and who has been authorized to do so by successfully completing a training program approved by the USEPA, followed by formal certification by the DOD or a state.
 2. DOD Certified Pesticide Applicator - DOD military or civilian personnel certified in accordance with the *DOD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides*.
 3. Installation Pesticide Applicators - DOD employees or contract personnel whose job responsibilities involve the application of pesticides on DOD installations and property.
 4. State-Certified Pesticide Applicators - persons certified in accordance with FIFRA by a state with an USEPA-approved certification plan.
 5. Uncertified Installation Pesticide Applicators - DOD employees who are not certified under the DOD or state plan during an apprenticeship period not exceeding 2 yr and who must apply pesticides under the supervision of a DOD or state-certified applicator.
- *Professional Pest Management Personnel* - DOD military officers commissioned in the Medical Service or Biomedical Sciences Corps or DOD civilian personnel with college degrees in biological or agricultural sciences who are in a current assignment that includes pest management responsibilities exercised regularly (DODI 4150.7, Enclosure 2)

G. Additional Records To Review

- Description of the installation's pest control program
- Any emergency exemption granted to the Air Force by the USEPA
- Integrated Pest Management Plan
- WIMS Pest Program.

H. Additional Physical Features To Inspect

- Golf Course Maintenance Areas.

I. People To Interview

- Base Civil Engineering
- Bioenvironmental Engineering
- Public Health Officer
- Pest Management Shop
- Golf Course Maintenance
- Base Fire Chief
- Base Contracting Office and Contract Pesticide Applicators
- Natural Resources Manager.

J. Guidance for Air Force Supplement Pesticide Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	PM.1.1 through PM.1.11
Missing Checklist Items	PM.2.1
Pesticide Applicators	PM.5.1 through PM.5.6
Pesticide Applications	
General	PM.10.1 through PM.10.7
Documentation	PM.40.1
Storage, Mixing, Handling	PM.45.1 through PM.45.21
Highly and Moderately Toxic Pesticides	PM.46.1 through PM.46.9
Disposal	PM.55.1 through PM.55.5

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<p align="center">REGULATORY REQUIREMENTS</p>	<p align="center">REVIEWER CHECKS: September 1999</p>
<p>PM.1</p> <p>ALL INSTALLATIONS</p> <p>PM.1.1. Copies of all relevant Federal, state, and local regulations on pesticide management should be maintained at the installation (MP) [Revised April 1999].</p>	<p>(NOTE: The term "pesticide" in this protocol refers to insecticides, rodenticides, herbicides, and other pest control chemicals (see definitions).)</p> <p>Verify that the following documents are maintained and kept current at the installation:</p> <ul style="list-style-type: none"> -EO 12088, <i>Federal Compliance with Pollution Standards</i>. -29 CFR 1910, <i>Occupational Safety and Health</i>. -40 CFR 166, <i>Exemption of Federal and State Agencies for Use of Pesticides Under Emergency Conditions</i>. -40 CFR 171, <i>Certification of Pesticide Applicators</i>. -DODI 4150.7, <i>DOD Pest Management Program</i>. -DODD 4715.1, <i>Environmental Security</i>. -AFI 32-1053, <i>Pest Management Program</i>. -Military Handbook 1028-8A, <i>Design of Pest Management Facilities</i>. -TIM 11 - <i>Hydrogen Phosphide Fumigation with Aluminum Phosphide</i> (Feb 1987). -TIM 13 - <i>Ultra Low Volume Dispersal of Insecticides by Ground Equipment</i> (Mar 1985). -TIM 14, <i>Personal Protective Equipment for Pest Management Personnel</i> (Mar 1992). -TIM 15, <i>Pesticide Spill Prevention and Management</i> (Jun 1992). -TIM 16, <i>Pesticide Fires: Prevention, Control and Cleanup</i> (Jun 1981). -TIM 18, <i>Installation Pest Management Program Guide</i> (Feb 1987). -TIM 20, <i>Pest Management Operations in Medical Treatment Facilities</i> (Oct 1989). -TIM 21, <i>Pesticide Disposal Guide for Pest Control Shops</i> (Oct 1986). -TIM 24, <i>Contingency Pest Management Pocket Guide</i> (Sep 1991). -TIM 25, <i>Devices for Electrocution of Flying Insects</i> (Aug 1988). -TIM 26, <i>Lyme Disease - Vector Surveillance and Control</i> (Mar 1990). -TIM 27, <i>Stored Products Pest Monitoring Techniques</i> (Jun 1992). -TIM 29, <i>Integrated Pest Management In and Around Buildings</i> (Jul 1994). -TIM 34, <i>Bee Resource Manual</i> (Aug 1995). -TIM 35, <i>Termite Inspection Recommendations</i> (Feb 1996). -TIM 36, <i>Personal Protective Techniques Against Insects and Other Arthropods of Military Significance</i> (Jan 1996). -applicable state and local regulations. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing or proposed activities and keeps the</p>

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<p>PM.1.2. Each installation is required to have a comprehensive pest management plan (DODI 4150.7, para 5.3.22.1, Enclosure 4, para E4.1.2, and Enclosure 6; AFI 32-1053, para 3.4.5) [Revised April 1999].</p>	<p>Environmental Protection Committee (EPC) informed as needed.</p> <p>Verify that all installation activities and satellite sites that perform pest control have been included in the plan.</p> <p>Verify that the plan/program addresses the following:</p> <ul style="list-style-type: none"> - annual requirements (such as labor and pest management measures to be used against each pest) - necessary attachments such as pesticide labels, safety data sheets, and agreements between appropriate state pesticide organizations and DOD - any unique pest management programs. - termite inspection frequency. <p>Verify that, if the installation has endangered or threatened species, the plan was coordinated with the regional U.S. Fish and Wildlife Service office.</p> <p>Verify that the plan is prepared in accordance with the guidance found in Section II of the AFPMB TIM 18.</p> <p>Verify that the plan includes necessary attachments such as pesticide labels, material safety data sheets (MSDSs), golf course pest management plans, and agreements between appropriate pesticide organizations and DOD.</p> <p>Verify that the plan includes all activities such as ranges, radar sites, missile sites, recreation areas, and any other activities that employ pesticides.</p> <p>Verify that the plan is updated annually.</p> <p>Verify that the Installation Pest Control Supervisor has coordinated with the following to ensure that the plan complies with applicable requirements:</p> <ul style="list-style-type: none"> - the Environmental Coordinator (EC) - the Natural Resources Manager (if assigned) - the Military Public Health (MPH) Officer - the BEE. <p>Verify that the pest management plan has been approved by the MAJCOM PMC.</p> <p>Verify that the plan was forwarded to the recognized pest consultant for review, technical approval, and signature on the cover sheet.</p> <p>Verify that the plan lists all program objectives, arranged in order of priority, according to potential or actual impact on health, morale, material, or property.</p> <p>Verify that the plan specifically addresses the surveillance and control of insects</p>

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	<p>and other arthropods in child care and food service facilities.</p> <p>Verify that the plan clearly delineates the responsibilities for surveillance and control of medically important insects and other arthropods.</p> <p>(NOTE: A suggested format for the plan appears in Enclosure 6 of DODI 4150.7.)</p> <p>Verify that the plan is a comprehensive, long-range, narrative document that:</p> <ul style="list-style-type: none"> -describes all installation and satellite installation pest management requirements and programs, including those for contracts, natural resources, golf courses, and out leases, and identifies minimum pest management staffing requirements -describes all IPM procedures required to monitor and control pests on the installation -describes all IPM procedures for surveillance and control of disease vectors -identifies all resources, such as work years, facilities, and equipment, required to support the installation pest management program -identifies all pesticides, including USEPA registration numbers, approved by the Component pest management consultant for use in the installation pest management program -describes all health and safety measures that will be taken to protect both pest management personnel and the general public from pesticide exposure and risk -identifies any planned measure to comply with DOD MOA with state pesticide regulatory offices relating to use or application of pesticides -describes pesticide management functions that can be done more economically through commercial contracts and provides, or references, cost comparison analysis -describes any pest management operation with special environmental considerations such as those that: <ul style="list-style-type: none"> - use a restricted-use pesticide - use any pesticide application that may contaminate surface or ground water - include 259 or more contiguous hectares (640 acres) in one pesticide operation - may adversely affect endangered or other protected species and their habitat - involve aerial application of pesticides - involve management or control of designated noxious weeds in cooperation with local control efforts - involve permits for the use of experimental use pesticides - identifies animal control efforts for feral cats, feral dogs, or wildlife - identifies active or potential vector-borne diseases and describe medical department collaboration with local and state agencies for vector surveillance and control matters

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<p>PM.1.3. Installations are required to follow specific restrictions when ordering pesticides and equipment (AFI 32-1053, para 4.5.1, 4.5.2, 4.5.3 and DODI 4150.7, para. 5.3.22.6 and Enclosure 4, para E4.1.6.1) [Revised April 1999].</p> <p>PM.1.4. Pesticide management service contracts are required to meet specific requirements (AFI 32-1053, para 4.7) [Revised April 1999].</p>	<p>– identifies golf course pest management operations.</p> <p>Verify that the pesticide application equipment is ordered from the Federal Supply catalog.</p> <p>Verify that only pesticides from the AFPMB and the preapproved IPMIS master inventory are used.</p> <p>Verify that the installation has sought and received MAJCOM approval before ordering or using nonstandard, locally purchased pesticides or application equipment.</p> <p>Verify that the installation only procures or acquires pest management material that has been recommended by the AFPMB or approved by the Component pest management consultant.</p> <p>Verify that advice code 2B is used on the ordering documents so that no one buys or issues nonapproved pesticides.</p> <p>Verify that MAJCOM has approved the statement of work or performance work statements for contracts in effect on the installation.</p> <p>Verify that MAJCOM approval was received prior to a request for procurement of a commercial pest management service.</p> <p>Verify that the BCE's contract management office works with the installation contracting office to ensure that all prospective contractors send proof that all their personnel have current state certification for the types of operations in the contract.</p> <p>Verify that certified pest management shop personnel help quality assurance evaluators (QAE) to evaluate pest management service.</p> <p>(NOTE: If an installation's pest management contract efforts are less than 0.25 work years, the presence of a trained QAE at the installation is not mandatory.)</p> <p>Verify that the contractor furnishes the QAE with labels and MSDSs for all contract pesticide materials 25 days prior to the start of contract.</p> <p>Verify that the QAE submits labels and MSDSs to the MAJCOM PMC at least 15 days prior to the start of the contract.</p> <p>Verify that any request during the contract period to use nonstandard pesticides (those not in the IPMIS) are forwarded to the MAJCOM PMC for approval prior</p>

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<p>PM.1.5. Self-help programs are required to be operated according to specific parameters (DODI 4150.7, para. 5.3.22.3 and Enclosure 4, para E4.1.8.9.3; and AFI 32-1053, para 3.4.8.1.) [Revised April 1999].</p> <p>PM.1.6. Deleted [Deleted October 1996].</p> <p>PM.1.7. Installations are required to meet specified measures of merit in the pest management program (DODI 4150.7, Enclosure 3) [October 1996].</p> <p>PM.1.8. Installations are required to notify Component pest management consultants whenever Federal, state, or</p>	<p>to use.</p> <p>Verify that the contractor provides data on daily pesticide use to put into the IPMIS and the data is forwarded monthly (by 10 days after close of month) to the MAJCOM PMC.</p> <p>Verify that the self-help store for military family housing issues according to guidance issued by HQ Air Force Civil Engineering Support Agency (AFCESA).</p> <p>Verify that self-help programs are established for military housing when cost effective and when IPM monitoring indicates the need for a self-help program.</p> <p>Verify that liquid pesticides are not issued.</p> <p>(NOTE: Acceptable materials to issue may include cockroach and ant baits and/or traps, mouse traps, glue boards, and general use pesticide aerosols with crack and crevice devices as recommended by the Component pest management consultant.)</p> <p>Verify that self-help personnel provide written instructions and appropriate precautions beyond those on pesticide labels to military quarters' and housing occupants.</p> <p>Verify that, if a pesticide is issued to an occupant, records are maintained.</p> <p>This checklist item has been deleted.</p> <p>Verify that all installations meet the following measures of merit:</p> <ul style="list-style-type: none"> - Measure of Merit 1: by the end of FY97 all installations have a pest management plan that is prepared, reviewed, and updated annually by pest management professionals - Measure of Merit 2: by the end of FY00, the amount of pesticides applied annually on DOD installations is reduced by 50 percent from the FY93 baseline in pounds of active ingredients (NOTE: The goal for this measure of merit shall not be obtained by substituting more toxic pesticides that have lower application rate than the pesticide in use.) - Measure of Merit 3: by the end of FY98, 100 percent of installation pesticide applicators are either DOD or state-certified, direct hire employees have a maximum of 2 yr to become certified after initial employment, contract employees need appropriate state certification. <p>Verify that if Federal, state, or local regulators ask to inspect pest management operations, the installation notifies the Component pest management consultant.</p>

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<p>local regulators ask to inspect pest management operations (DODI 4150.7, Enclosure 4, para E4.1.3.2) [Citation Revised 1998].</p> <p>PM.1.9. Checklist item deleted [Deleted June 1998].</p> <p>PM.1.10. Pest management and disease vector control during military contingency operations, readiness training exercises, and deployments are required to follow specific parameters (DODI 4150.7, Enclosure 4, para E4.1.9) [Citation Revised June 1998].</p> <p>PM.1.11. Pest management consultants are required to provide guidance needed to protect all closing or closed facilities from pests from the beginning of deactivation until property disposal (DODI 4150.7, Enclosure 4, para. E4.1.8.10) [Citation Revised June 1998].</p>	<p>This checklist item is deleted because its contents are captured in PM.45.8.</p> <p>Verify that, during military contingency operations, readiness training exercises, and deployments, pesticides are applied consistent with the policies and procedures described in DODI 4150.7.</p> <p>Verify that individuals who apply pesticides in these situations are certified as necessary or under the direct supervision of a certified individual.</p> <p>(NOTE: Shipboard independent duty technicians and other military personnel who have received special training for limited site application of preselected pesticides during military operations or deployments are exempt from the certification requirement.)</p> <p>Verify that pest management consultants provide the guidance needed to protect all closing or closed facilities from pests from the beginning of deactivation until property disposal.</p>

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<p>PM.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>PM.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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<p>PM.5</p> <p>PESTICIDE APPLICATORS</p> <p>PM.5.1. Installation pest management personnel are required to meet specific certification requirements (DODI 4150.7, para. 5.3.22.4 and Enclosure 4, para E4.1.5; and AFI 32-1053, para 3.4.3.7, 3.4.3.8, and 4.7.6.1) [Revised April 1999].</p>	<p>Verify that all installation pest management personnel who apply or supervise the application of pesticides are trained and certified within 2 yr of employment in accordance with the <i>DOD Plan for Certification of Pesticide Applicator for Restricted Use Pesticides</i>, or a USEPA approved State Certification plan.</p> <p>Verify that personnel who are undergoing apprenticeship training, but are not yet certified, apply pesticides only under the direct supervision of a certified pesticide applicator.</p> <p>(NOTE: In situations where an installation has unique requirements, the Component senior pest management consult will determine the training and experience needed to perform the pesticide management activities needed.)</p> <p>Verify that both DOD and state-certified pesticide applicators are recertified every 3 yr.</p> <p>Verify that contractor employees are certified prior to beginning the job.</p> <p>Verify that QAEs receive pesticide management training.</p> <p>(NOTE: These certification requirements do not apply to DOD personnel and family members who apply pesticides under DOD installation self-help programs or for their own relief.)</p> <p>Verify that trained pest management personnel apply general-use pesticides under the supervision of certified personnel.</p> <p>Verify that pesticides classified as controlled are applied by trained pesticide applicators only.</p> <p>Verify that neither prisoners nor volunteer workers are assigned to apply pesticides.</p> <p>(NOTE: After receiving training from pest management personnel, nonpest-management personnel may apply pesticides in the following situations:</p> <ul style="list-style-type: none"> - adult military housing occupants and facility building managers may apply approved self-help pesticides - military personnel may apply approved arthropod repellents (aerosol, creme, lotion, stick) for personnel protection and for use on uniforms, tents, and mosquito netting - military personnel may apply approved aerosol insecticide for quarantine

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<p>PM.5.2. Pest management personnel are required to use all pesticides according to label directions and use equipment according to the manufacturer's instructions (AFI 32-1053, para 4.5.4.) [Citation Revised April 1999].</p> <p>PM.5.3. All pesticide applicators are required to participate in a medical surveillance program (AFI 32-1053, para 3.4.9.1 and 3.5.4) [Revised April 1999].</p> <p>PM.5.4. Personal protective equipment (PPE) and protective clothing are required to be provided at employer (Air Force or contractor) expense (AFI 32-1053, paras 3.4.9.3, 3.6.3, and 4.4) [Revised April 1999].</p>	<p>insect extermination on aircraft after receiving training from BCE Pest Control Section.)</p> <p>Verify that pest management personnel use all pesticides according to label directions and use equipment according to the manufacturer's instructions.</p> <p>(NOTE: The Public Health Officer, with the Occupational Health Review Board, determines the scope of occupational physicals and provides the physical exams section with a current roster for scheduling occupational physical exams.)</p> <p>Verify that all personnel new to the career field receive a baseline physical exam prior to potential occupational exposure to pesticides and periodic occupational physical exams as directed by the local Aeromedical Council.</p> <p>Verify that all BCE and golf course personnel who apply pesticides are included in the exam schedule.</p> <p>Verify that personal protective clothing and PPE is provided for and used by pesticide applicators.</p> <p>(NOTE: Use of the following equipment depends upon magnitude and type of operations:</p> <ul style="list-style-type: none"> - respirators - goggles - nitrile or chemical- and oil-resistant gloves - rubber boots - safety shoes - coveralls - specialized PPE for fumigation.) <p>Verify that appropriate PPE is used.</p> <p>Verify that protective clothing and equipment are stored away from chemical areas.</p> <p>Verify that overalls are kept clean at all times.</p>

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<p>PM.5.5. Medical treatment facilities personnel may neither store nor use USEPA-classified pesticides (AFI 32-1053, para 3.6.4) [Revised April 1999].</p> <p>PM.5.6. Checklist item deleted [October 1996].</p>	<p>Verify that shop washing machines and dryers are used or that any clothing sent to installation laundry services is clearly identified as being contaminated with pesticides.</p> <p>Verify that periodic fit testing of respirators is conducted.</p> <p>Verify that medical treatment facilities personnel neither store nor use USEPA-classified pesticides.</p> <p>(NOTE: This prohibition does not apply to disinfectants, germicides, insect repellents, and permethrin-treated clothing for protection of deploying personnel against insect vectors.)</p> <p>This checklist item has been moved to PM.40.1 to more closely match the organization of TEAM Guide.</p>

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<p>PESTICIDE APPLICATIONS</p> <p>PM.10 General</p> <p>PM.10.1. Notification is required to be made and/or approval received for certain application activities (AFI 32-1053, para 3.4.9.4, 3.4.10.1, 3.4.10.2, 3.4.10.4, 3.4.10.5, 3.4.12.2) [Revised April 1998].</p> <p>PM.10.2. Equipment used for pesticide applications is required to be dedicated to the pest management operation and meet specific requirements (AFI 32-1053, para 4.6.) [Revised April 1999].</p>	<p>Verify that the BEE and Public Health are notified prior to any pesticide applications in food preparation or consumption facilities, medical facilities, or child development centers.</p> <p>Verify that the PHO is notified prior to fumigation activities.</p> <p>Verify that the Installation Pest Control Supervision coordinates all fumigations with installation medical (including MPH), fire, security police, and safety personnel.</p> <p>Verify that the fire department receives a hard copy of pest management, self-help, and golf course building locations and layouts indicating pesticides storage areas.</p> <p>Verify that the fire department receives a copy of the pesticide inventory and MSDSs quarterly.</p> <p>Verify that no internal combustion or electrical power-driven spraying machines for aerosol or mist sprays are used inside buildings without approval from BEE and the installation Fire Chief.</p> <p>Verify that the BEE receives the following:</p> <ul style="list-style-type: none"> - a hard copy of installation pesticide inventories - quarterly summary of pesticide application records - applicable MSDSs. <p>Verify that vehicles and dispersal equipment are used solely in support of pest management activities.</p> <p>Verify that only pest management personnel use pest control vehicles.</p> <p>Verify that vehicles are equipped with locking compartments for safe handling, storage, and transport of pesticides.</p> <p>(NOTE: A telephone maintenance truck will suit the purpose.)</p> <p>Verify that the truck carries emergency phone numbers and a spill cleanup kit.</p> <p>Verify that pest control workers carry radios or portable phones in vehicles.</p>

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<p>PM.10.3. Insecticides will not be injected into the soil to control subterranean termites in any military buildings with subslab or in-slab heating, ventilation, or air conditioning ducts unless specific conditions are met (AFI 32-1053, para 3.4.11.2) [Revised April 1999].</p> <p>PM.10.4. Installations are required to ensure their pesticide applications do not adversely impact endangered species or their habitat (AFI 32-1053, para 3.4.5.4) [Citation Revised April 1999].</p> <p>PM.10.5. Installations are required to use recyclable and refillable pesticide containers and closed pesticide mixing and transfer systems as much as possible (AFI 32-1053, para 3.4.11.1) [Citation Revised April 1999].</p>	<p>Verify that placards are attached to trailer-mounted sprayers that identify the pesticide common name that is being applied.</p> <p>Verify that all pesticide dispersal equipment is kept in the BCE pest management section.</p> <p>(NOTE: Dispersal equipment at installation golf courses that have certified pesticide applicators are exempt from this requirement.)</p> <p>Verify that vehicles (prime movers) used for fogging, misting, dusting, or ultra low volume (ULV) application are equipped with enclosed cabs and internal recycling air conditioners to protect the operator from excessive pesticide exposure.</p> <p>Verify that insecticides are not injected into the soil to control subterranean termites in any military buildings with subslab or in-slab heating, ventilation, or air conditioning ducts unless permanent blocks are made to the ducts.</p> <p>Determine if personnel are aware of any endangered or threatened species at the installation and the impact of pesticides on these and other wildlife.</p> <p>Verify that, if endangered or threatened species are present, the Pest Management Plan has been coordinated with the U.S. Fish and Wildlife Service Office.</p> <p>Determine if the Pest Management Shop has coordinated with the Natural Resources Manager.</p> <p>Verify that the installation uses recyclable and refillable pesticide containers and closed pesticide mixing and transfer systems as much as possible.</p>

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<p>PM.10.6. Paint containing insecticides is prohibited from use on DOD property (DODI 4150.7, Enclosure 4, para E4.1.6.6) [Citation Revised June 1998].</p>	<p>Verify that paint, both interior and exterior, containing insecticides are not used on the installation.</p> <p>(NOTE: Paints containing fungicides as mildew inhibitors may be used when the application directions specify no special restrictions due to the fungicide. Approved marine anti-fouling compounds or coatings may be applied to protect the surfaces of watercraft.)</p>
<p>PM.10.7. The use of regularly scheduled, periodic pesticide applications is prohibited except in specific circumstances (DODI 4150.7, Enclosure 4, para E4.1.6.7) [Citation Revised June 1998].</p>	<p>Verify that the installation does not perform regularly scheduled, periodic pesticide applications except in situations where the installation pest management plan clearly documents that no other technology or approach is available to protect personnel or property of high value.</p> <p>Verify that preventative pesticide treatments are not used unless the Component pest management consultant has given approval based on current surveillance information or records documenting past disease vectors or pest problems that require this approach.</p>

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<p>PESTICIDE APPLICATIONS</p> <p>PM.40 Documentation</p> <p>PM.40.1. Records are required to be maintained and summary reports written for pest management activities (AFI 32-1053, para 2.4.13. and 2.4.14; and DODI 4150.7, para 5.3.22.7 and 5.3.22.10, Enclosure 4, para E4.1.10) [Citation Revised June 1998].</p>	<p>Verify that records of all pest management operations performed on the installation, except for personal relief, are properly maintained and reported to the Component pest management consultant.</p> <p>Verify that WIMS pesticide software is used to track pesticide inventories and pesticide applicator certifications.</p> <p>Verify that daily pesticide use is recorded on the WIMS pesticide software.</p> <p>(NOTE: DD Forms 1532 and 1532-1 may be used if WIMS is not on-line.)</p> <p>Verify that DD Form 1532, Pest Management Report, or an equivalent computer product, is produced monthly using the DD Form 1532-1 information.</p> <p>Verify that the records:</p> <ul style="list-style-type: none"> - account for all shop operations and provide a historical record of pest management operations and pesticide applications for each building, structures, or out door site - include information on kinds, amounts, uses, dates, places of application, and applicator names and certification numbers - include all pesticide application performed on the installation, including work done on golf courses by nonappropriated fund activities, by contract services, and as a part of leases and land management and forestry programs as well as the work performed by the installation pest management shop. <p>Verify that historical data is kept on pesticide application in accordance with Air Force Manual 37-139, <i>Record Disposition--Standards</i> (formerly Air Force Regulation (AFR) 4-20, volume 2).</p> <p>Verify that Quarterly Reports are sent no later than 15 days after the close of quarter to the MAJCOM.</p> <p>Verify that applications performed during military operations, excluding arthropod skin and clothing repellent, are recorded.</p> <p>Verify that the Quarterly Reports include the following:</p> <ul style="list-style-type: none"> - pesticide inventory data - pesticide applicator certification data - pesticide application data (equivalent of Report Control Symbol (RCS) DD-

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	<p>P&L[A&AR]1080) for all pest management operations on Air Force real property:</p> <ul style="list-style-type: none"> - pest management shop - self-help pest control - roads and grounds - golf course - contractors - forestry - lessee and land permit holders.

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<p>PM.45</p> <p>STORAGE, MIXING, HANDLING</p> <p>PM.45.1. Installations must store contingency pesticides under the same controlled temperature, security, and other conditions as daily use pesticides (AFI 32-1053, para 3.4.6.2) [Citation Revised April 1999].</p> <p>PM.45.2. Installations must rotate contingency pesticide stocks back to pest management shop inventories and replace them with fresh chemicals as needed (AFI 32-1053, para 3.4.6.3) [Revised April 1999].</p> <p>PM.45.3. Pesticide management facilities and service vehicles must be provided with spill kits (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.5.2.2) [Revised April 1999].</p> <p>PM.45.4. Installations must include certain features in pest management facilities (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.3, 3.1.4.3, and 3.4.8) [Citation Revised April 1999].</p>	<p>Verify that the installation stores contingency pesticides under the same controlled temperature, security, and other conditions as daily-use pesticides.</p> <p>Verify that the installation rotates contingency pesticide stocks back to pest management shop inventories and replaces them with fresh chemicals as needed.</p> <p>Verify that pesticide management facilities are provided with spill kits.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p> <p>Verify that pesticide service vehicles are equipped with spill kits.</p> <p>Verify that pest management facilities include at least the following:</p> <ul style="list-style-type: none"> – clean areas (office, vestibule, and airlock (where appropriate, given weather conditions), and mechanical and electrical spaces) – pesticide handling areas (storage and mixing rooms) – transitional areas (dressing area, shower and locker rooms, toilet, laundry, and cleaning gear room) – an outdoor hardstand and parking apron for vehicles and equipment. <p>(NOTE: This applies when designing new facilities or renovating existing</p>

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<p>PM.45.5. Pest management facilities must have security fencing and gates (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.4.6) [Citation Revised April 1999].</p> <p>PM.45.6. Drains from pesticide mixing areas must not be connected to septic systems, sanitary sewers, or stormwater systems (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.5.2.3 and 3.5.2.5) [Citation Revised April 1999].</p>	<p>facilities.)</p> <p>Verify that arrangement of spaces allows workers to arrive in a clean area, dress for hazardous exposure in the change area, leave through a pesticide area doorway, and retrace that path at the end of the workday.</p> <p>Verify that there is no direct access between the office and the pesticide storage and mixing areas.</p> <p>Verify that doorways are arranged so that no pesticide need be carried through clean areas.</p> <p>Verify that the mixing room is located adjacent to the storage area and the equipment storage area (if indoors).</p> <p>Verify that the mixing room is accessible through the corridor to the shower and locker rooms and the exterior.</p> <p>Verify that a climb-resistant chain link fence prevents unauthorized entry.</p> <p>(NOTE: The fence may be omitted if other security measures, such as bars or heavy-gauge wire mesh over the windows, are taken.)</p> <p>Verify that the fence is at least 7-ft (2.13-m) high, without top rail.</p> <p>Verify that the fence fabric is twisted and barbed at the top and bottom.</p> <p>Verify that security gates to the fence are kept locked.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p> <p>Verify that no pesticide mixing area is connected to septic systems, sanitary sewers, or stormwater systems.</p> <p>Verify that, for new construction, the facility has no drainage to holding tanks.</p> <p>(NOTE: Discharge may be allowed if it is listed in a Federal or state water permit.)</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>

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<p>PM.45.7. Pest management facilities must be located in accordance with specific criteria (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.4.1 through 3.4.5) [Citation Revised April 1999].</p>	<p>Verify that pest management facilities are located away from congested areas.</p> <p>Verify that new construction results in isolated, single-purpose structures.</p> <p>Verify that pest management facilities are located a minimum of 200 ft (61 m) from surface water, existing wells and cisterns, and 100-yr floodplains.</p> <p>Verify that the facility is located downhill from the above sensitive areas.</p> <p>(NOTE: Diking must be provided if space is limited.)</p> <p>Verify that the facility is not located uphill from potable water sources or continuously occupied structures.</p> <p>(NOTE: Facilities should not be located over aquifers (subsurface potable water supplies) unless the aquifer is adequately protected through containment measures.)</p> <p>Verify that the facility is located at least 100 ft (30.4 m) from other structures.</p> <p>Verify that vehicles carrying supplies or pulling trailer-mounted dispersal equipment have access to the facility.</p> <p>Verify that the facility is accessible to vehicles and pedestrians on at least two sides.</p> <p>Verify that runoff from firefighting is prevented from reaching ponds, lakes, streams, or rivers.</p> <p>(NOTE: Diking, if provided, is recommended for large pest management facilities only.)</p> <p>Verify that there is adequate space to park all pesticide dispersal equipment inside the pest management area, under cover.</p> <p>Verify that the part of the compound used for travel and vehicle parking is covered with gravel or paved.</p> <p>Verify that employee parking, if provided, is located outside the security fence or perimeter.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>

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<p>PM.45.8. Installations must meet specific requirements with regard to the foundations, floor slabs, exterior walls, and floor finishes in pest management facilities (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.5.1 and 3.1.5.2) [Citation Revised April 1999].</p>	<p>Verify that there are no floor drains in the interior pesticide areas.</p> <p>Verify that, in areas where pesticides are handled or stored, floors slope (3/100) from sills to the center.</p> <p>Verify that, if the floor does not slope, a 4-in. (102 mm) concrete curb is provided in the pesticide areas.</p> <p>Verify that exterior slabs slope to a sump with a closeable drain located not more than 6 ft (1.829 m) from the outer margin of the washstand.</p> <p>Verify that exterior ramps slope downward from exterior flat (flushed) door sills.</p> <p>(NOTE: The intent of these provisions is to provide containment for at least 110 percent of the capacity of the largest bulk liquid pesticide container anticipated for the facility.)</p> <p>Verify that no utility, heating, or ventilation ducting is located in or below slabs.</p> <p>Verify that pesticide concentrates and finished (formulated) materials are prevented from entering the sanitary or storm sewer systems.</p> <p>Verify that concrete floors are finished with a nonabsorbent nonskid finish.</p> <p>(NOTE: Change rooms and office floors may be tiled.)</p> <p>Verify that the floors in both the storage and mixing areas are covered with nonskid epoxy sealant or are otherwise made impermeable.</p> <p>Verify that exterior walls are constructed of metal, concrete, or masonry.</p> <p>Verify that the interior surfaces of exterior walls are constructed of metal, coated concrete, or masonry.</p> <p>Verify that no porous surface finishes are used.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>
<p>PM.45.9. Installations must meet specific requirements with regard to the doors and windows in pesticide management facilities (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-A, para</p>	<p>Verify that exterior doors are self-locking and self-closing with weather stripping.</p> <p>Verify that doors have locks that prevent unauthorized entry.</p> <p>Verify that flat (flush) sills are provided for all doors between the mixing and storage areas.</p> <p>Verify that the facility has a 9 ft by 9 ft (2.74 m by 2.74 m) overhead garage door</p>

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	<p>Verify that the hardstand has a sign that reads as follows:</p> <p>CLOSE DRAIN WHILE HANDLING PESTICIDES ON HARDSTAND.</p> <p>Verify that a sign is provided near the hardstand's pit valve stating:</p> <p>RECOVER PESTICIDE SPILLS</p> <p>USE VALVE TO DRAIN WASHWATER AND RAIN.</p> <p>Verify that, if a flammable liquid storage cabinet is present, a sign is provided that reads as follows:</p> <p>FLAMMABLE PESTICIDES.</p> <p>Verify that a list of the types of materials stored is posted on the outside of the storage area.</p> <p>(NOTE: Copies of this list should be given to the installation onscene hazardous waste coordinator and to the fire department.)</p> <p>Verify that the list includes chemical names and formulations rather than generic brand names.</p> <p>Verify that a sign is posted at the mixing area that requires the use of protective gloves, aprons and boots, protective eyewear or face shields, coveralls, and an approved pesticide respirator.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>
<p>PM.45.11. A fire extinguisher must be provided by the door between the storage and mixing areas (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.7.1) [Citation Revised April 1999].</p>	<p>Verify that a fire extinguisher is located by the door between the storage and mixing areas.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>
<p>PM.45.12. Pesticide management areas must have</p>	<p>Verify that reduced pressure backflow prevention devices are installed on plumbing that provides a source of water for filling pesticide dispersal equipment</p>

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<p>backflow prevention devices (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.5.2.10 and 3.5.2.11) [Citation Revised April 1999].</p> <p>PM.45.13. Mixing and storage areas must have a ventilation system separate from that in the rest of the facility (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.5.4.2) [Citation Revised April 1999].</p> <p>PM.45.14. Mixing sinks must have slotted hood, local exhaust systems (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.5.4.2) [Citation Revised April 1999].</p>	<p>tanks.</p> <p>Verify that permanent hose bibs (overhead filling pipes) have a discharge hose and an approved backflow prevention device.</p> <p>(NOTE: The requirement as to hose bibs applies to outdoor washdown areas of medium and large facilities.)</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p> <p>Verify that mixing and storage areas have a ventilation system separate from that in the rest of the facility.</p> <p>Verify that the system is provided with a roof-mounted, centrifugal fan system selected for a minimum of six air changes per hour.</p> <p>Verify that fans discharge vertically.</p> <p>Verify that replacement air is heated to 55 °F (13 °C).</p> <p>Verify that the ventilation system has a control switch with a light to indicate ON at the entrance to the pesticide handling areas.</p> <p>Verify that the control switch has a sign that reads as follows:</p> <p style="text-align: center;">VENTILATION SYSTEM SHOULD OPERATE CONTINUOUSLY</p> <p style="text-align: center;">DO NOT ENTER UNLESS VENTILATION SYSTEM HAS</p> <p style="text-align: center;">OPERATED FOR AT LEAST 10 MINUTES.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p> <p>Verify that the mixing sink has a slotted hood, local exhaust system.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>

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<p>PM.45.15. Outdoor hardstands and parking aprons for vehicles must meet specific standards (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.4.8) [Citation Revised April 1999].</p>	<p>Verify that the outdoor hardstand and parking apron consist of a concrete pad sufficiently large enough to park a truck and trailer (at least 15 ft by 25 ft (4.57 m by 7.62 m)).</p> <p>Verify that the hardstand pad slopes (3/100) to a sump fitted with a removable grate cover suitable for the anticipated vehicular traffic load.</p> <p>Verify that the sump is sufficiently large to contain a minimum of 110 percent of the capacity of the largest bulk liquid pesticide container anticipated to be used at the facility.</p> <p>Verify that there is a curb at least 4-in. (102-mm) high at the low edge of the pad to direct liquid into the sump.</p> <p>Verify that, if an industrial sewer is available, a 3-in. (75 mm) sump drain is provided.</p> <p>Verify that, if a connection to an industrial sewer exists, the sump has a ball valve in the sump drain to control discharge.</p> <p>Verify that the valve is located adjacent to the sump in a pit with a grate cover.</p> <p>Verify that the ball valve is normally closed and manually opened.</p> <p>Verify that, if no industrial sewer is available, a small section of removable grate is provided to accommodate a hose for recovering sump contents.</p> <p>Verify that the hardstand area has an elevated hose bib (fill pipe) of 1.5 to 2-in. (38 to 51-mm) diameter.</p> <p>(NOTE: This requirement applies if application equipment with tanks 50 gal (189.9 L) or larger will be used at the facility.)</p> <p>Verify that the hardstand area has an emergency eyewash and a deluge shower with manually operated, delayed-closing valves located adjacent to the mixing site.</p> <p>(NOTE: This requirement does not apply if devices inside the facility are accessible within 10 s from the outdoor mixing site.)</p> <p>(NOTE: The hardstand area may be provided with a canopy roof to protect parked vehicles and equipment and to minimize the accumulation of water.)</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>

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<p>PM.45.16. Pesticide storage areas must be regularly inspected and secured to prevent unauthorized access (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.4.1.1) [Citation Revised April 1999].</p>	<p>Verify that storage areas are inspected regularly and secured to prevent unauthorized access.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>
<p>PM.45.17. Indoor storage areas for pesticides must meet specific requirements (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.4.1.2) [Citation Revised April 1999].</p>	<p>Verify that pesticides are stored in an area sealed or separated from clean areas, with direct access to the exterior.</p> <p>Verify that pesticides are stored so that:</p> <ul style="list-style-type: none"> – they are off the floor, with all labels visible – they are stored no more than 8-ft (2.44-m) high. <p>Verify that lanes are present to provide effective access and inspection.</p> <p>Verify that pesticides are stored in a dry building in which the temperature is maintained is above 50 °F (12 °C) and below 100 °F (38 °C).</p> <p>Verify that pesticides are stored separated from the following areas:</p> <ul style="list-style-type: none"> – mixing areas – shower and locker room – offices – any area where personnel work for prolonged periods. <p>Verify that no pesticide concentrates are stored in a room containing a floor drain of any type.</p> <p>Verify that storage and mixing areas have containment provided either by curbing or sloped floors.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>
<p>PM.45.18. Certain chemicals must be stored outside of occupied buildings (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.4.1.4) [Citation Revised April 1999].</p>	<p>Verify that all liquid fumigants are stored outside of occupied buildings in hazardous chemical lockers.</p> <p>Verify that toxic or flammable pesticides are stored on the ground floor of unoccupied buildings.</p> <p>(NOTE: This applies when designing new facilities or renovating existing</p>

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<p>PM.45.19. Outdoor storage areas for pesticides must meet specific requirements (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.4.1.4) [Citation Revised April 1999].</p> <p>PM.45.20. Motor vehicles may not be stored in the same areas as pesticides (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.4.1.3) [Citation Revised April 1999].</p> <p>PM.45.21. Mixing rooms must meet specific requirements (AFI 32-1053, para 3.4.2.4 and MIL-HDBK 1028-8A, para 3.1.4.2) [Citation Revised April 1999].</p>	<p>facilities.)</p> <p>Verify that outdoor storage areas for pesticides are:</p> <ul style="list-style-type: none"> – secured and under cover – protected from radiant heating, freezing temperatures, and moisture. <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p> <p>Verify that no motor vehicles are stored in the same area as pesticides.</p> <p>(NOTE: Wherever possible, vehicles are to be located outside or in a separate building from the pesticide storage or handling area.)</p> <p>Verify that, where motor vehicles are located under the same roof as the pesticide area, they are separated from the pesticide area by a minimum of 2-h fire rated construction.</p> <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p> <p>Verify that mixing rooms have electricity and hot and cold water.</p> <p>Verify that mixing rooms have metal or plastic shelves to hold pesticides off the floor.</p> <p>(NOTE: Plastic is preferred for the pallets and steel stands are recommended for keeping drums off the floor.)</p> <p>Verify that no wooden pallets are in use.</p> <p>Verify that the work area contains a pesticide-resistant sink equipped with the following:</p> <ul style="list-style-type: none"> – a closeable drain – a contiguous self-draining, drip-proof counter top at least 5-ft (1.524-m) long – sideboards – splash panel on back – an adjacent shelf for holding measuring devices and concentrates. <p>(NOTE: This applies when designing new facilities or renovating existing facilities.)</p>

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<p>PM.46</p> <p>HIGHLY AND MODERATELY TOXIC PESTICIDES</p> <p>PM.46.1. Sites where pesticides and excess pesticides that are classed as highly toxic or moderately toxic and are required to be labeled with DANGER, POISON, WARNING, or the skull and crossbones symbol are stored should meet specific requirements (MP) [January 1997].</p> <p>PM.46.2. An environmental monitoring system should be considered in the vicinity of pesticide storage facilities when there is no spill management system and the facility handles large quantities of pesticides and is located near a sensitive area (MP) [January 1997].</p> <p>PM.46.3. Storage facilities for pesticides and excess pesticides classed as highly toxic or moderately toxic which are required to be labeled with DANGER, POISON, WARNING, or the skull and crossbones symbol should meet specific structural requirements (MP) [January 1997].</p> <p>PM.46.4. The storage of pesticides and excess pesticides classed as highly</p>	<p>Verify that the site location, where possible, is in an area where flooding is unlikely and where hydrogeologic conditions prevent contamination of any water system by runoff or percolation by:</p> <ul style="list-style-type: none"> – inspecting area surrounding facilities and determine proximity to surface water – noting location relative to floodplains, depth of groundwater, and general soil types and typical permeability. <p>Determine if the site appears to be contaminated with pesticides and if there is a need for an environmental monitoring system.</p> <p>Verify that storage is in a dry, separate room, building, or covered area where fire protection is provided.</p> <p>Verify that:</p> <ul style="list-style-type: none"> – pesticide containers are stored with the label plainly visible

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<p>toxic or moderately toxic which are required to be labeled with DANGER, POISON, WARNING, or the skull and crossbones symbol is required to meet specific operational requirements (MP) [January 1997].</p> <p>PM.46.5. Decontamination facilities are required for personnel and equipment at installations which use pesticides classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, WARNING, or the skull and crossbones symbol on the label (MP) [January 1997].</p> <p>PM.46.6. Facilities where pesticides are stored or used that are classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, WARNING, or the skull and crossbones symbol should follow specific practices and procedures to ensure safety (MP) [January 1997].</p>	<ul style="list-style-type: none"> - all containers are in good condition - the lids and bungs on metal or rigid plastic containers are tight - the pesticides are segregated, and if practicable, stored under a sign containing the name of the formulation - rigid containers are stored upright and all containers are stored off the ground. <p>Verify that a complete inventory is kept indicating the number and identity of containers in a storage unit.</p> <p>Verify that containers are regularly inspected for corrosion and leaks and that absorbent material is available for spill cleanup.</p> <p>Verify that excess pesticides and their containers are segregated.</p> <p>Verify that facilities are available for personnel decontamination.</p> <p>Verify that facilities are available for the decontamination of equipment, including vehicles which have been used for pesticide applications.</p> <p>Verify that there are berms, curbing, impervious surfaces, and catchment drains which are used to impound washwater resulting from decontamination.</p> <p>Verify that no food consumption, drinking, smoking, or tobacco use is undertaken in any area where pesticides are present by inspecting facilities.</p> <p>Verify that the following practices are performed in pest management operations:</p> <ul style="list-style-type: none"> - persons handling pesticides keep hands away from mouths and eyes and wear rubber gloves during all pesticide handling - persons handling pesticides wash hands immediately upon completion of working with pesticides and always prior to eating, smoking, or using toilet facilities - persons working regularly with organophosphates and N-alkyl carbamate pesticides have periodic physical examinations, including cholinesterase tests - inspections are made once a month to determine if any pesticide containers are leaking - pesticide containers are inspected for leakage prior to handling - unauthorized persons are not allowed in storage areas.

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<p>PM.46.7. Pesticide storage facilities and equipment which contain or use pesticides classed as highly toxic or moderately toxic and are labeled with DANGER, POISON, WARNING, or the skull and crossbones symbol are required to have signs and safety procedures posted (MP) [January 1997].</p> <p>PM.46.8. Where large quantities of pesticides classed as highly toxic or moderately toxic and are labeled DANGER, POISON, WARNING, or with the skull and cross bones symbol are being stored, or other conditions warrant, the local fire department, hospitals, public health officials, and police department are required to be notified in writing that pesticides are being stored in the event of a fire (MP) [January 1997].</p> <p>PM.46.9. Certain precautions should be taken in the event of a fire at a pesticide storage area where pesticides classed as highly toxic or moderately toxic and are labeled DANGER, POISON, WARNING, or with the skull and crossbones symbol are located (MP) [January 1997].</p>	<p>Look for signs which read DANGER, POISON, PESTICIDE STORAGE on or near entries to storage facilities.</p> <p>Verify that safety precautions and accident prevention measures are posted.</p> <p>Verify that an inventory of pesticides is displayed outside of the storage facility identifying all chemicals in storage.</p> <p>Verify that mobile equipment used for pesticide applications is labeled CONTAMINATED WITH PESTICIDES and is not removed from the storage site without being thoroughly decontaminated.</p> <p>Verify that notification has been submitted and includes a statement of the hazards which pesticides may present during a fire.</p> <p>Verify that a floor plan of the storage facility indicating the location of the different pesticide classifications has been submitted to the fire department.</p> <p>Verify that the fire chief has the home telephone numbers of the person(s) responsible for the pesticide storage facility.</p> <p>Verify that the following procedures are practiced by interviewing the Fire Chief:</p> <ul style="list-style-type: none"> - firefighting personnel wear supplied air suits and rubberized clothing - personnel avoid breathing or otherwise contacting toxic smoke and fumes - personnel washes completely as soon as possible after encountering smoke and fumes - the water used in firefighting is contained within the storage site drainage system - individuals who might be threatened by the fumes or smoke are evacuated - firemen take cholinesterase tests after fighting fires involving organophosphate or N-alkyl carbamate pesticides.

**COMPLIANCE CATEGORY:
PESTICIDE MANAGEMENT
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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>PM.55</p> <p>DISPOSAL</p> <p>PM.55.1. Disposal of pesticides must be done according to specific parameters (AFI 32-1053, para 4.5.5) [Revised April 1999].</p> <p>PM.55.2. Checklist item deleted [Deleted April 1999].</p> <p>PM.55.3. Installations should dispose of any pesticide, pesticide container, or pesticide residue according to specific restrictions (MP) [January 1997].</p> <p>PM.55.4. Pesticide residues and rinse liquids should be added to spray mixtures or disposed of according to their pesticide type (MP) [January 1997].</p> <p>PM.55.5. Installation pest management programs are to be managed to ensure pesticides do not become hazardous waste (DODI 4150.7, Enclosure 4, para E4.1.6.3) [Citation Revised June 1998].</p>	<p>Verify that all pesticides or pesticide containers that have deteriorated or cannot be returned to depot stocks are disposed of.</p> <p>(NOTE: DRMO processes excess stools of pesticides for turn-in and disposal according to current environmental policy guidance.)</p> <p>This checklist item was deleted due to the revision of AFI 32-1053, 1 April 1999.</p> <p>Verify that pesticides, pesticide containers, or pesticide residues are disposed of such that:</p> <ul style="list-style-type: none"> - it is not inconsistent with labeling - open dumping of pesticides or pesticide containers is not done - open burning is not done except when allowed by state and local regulation - water dumping or ocean dumping would not occur. <p>Verify that pesticide residues or rinse liquids are reused.</p> <p>Verify that, if they are not reused, they are disposed of according to their pesticide type.</p> <p>Verify that excess USEPA-registered pesticides are either:</p> <ul style="list-style-type: none"> - returned to the DLA Materials Return Program - transferred to a DOD installation able to use the materials - transferred to the servicing DRMO. <p>(NOTE: The Component pest management consultant can, if requested, provide assistance in identifying installations where usable pesticides could be used.)</p> <p>(NOTE: When the USEPA publishes a proposed pesticide regulatory action involving pesticide label suspension or cancellation that affects DOD, installations are required to comply with administrative procedures developed between the DLA and AFPMB.)</p>

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SECTION 8

PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 13-212, Volume 1, *Weapons Ranges*. This instruction, dated 28 July 1994, discusses the management of air to surface weapons ranges.
- AFI 23-201, *Fuels Management*. This instruction, dated 1 October 1996, provides policy and procedures for fuels operations. If this instruction is in conflict with a Technical Order (TO), the TO takes precedence.
- AFI 23-502, *Recoverable and Unusable Liquid Petroleum Products*. This instruction, dated 6 April 1994, sets goals, assigns responsibilities, and provides guidance for recovering usable and disposing of unusable liquid petroleum products. This instruction applies to lubricating oils, aviation fuel, distillates, and gasoline.
- Air Force Manual (AFM) 85-16, *Maintenance of Petroleum Systems*. This manual governs the maintenance of permanently installed storage and dispensing systems for petroleum and unconventional fuels.
- Technical Order (TO) 42B-1-23. This TO provides guidelines for collecting, segregating, and processing reclaimed, recoverable, and waste petroleum products.

B. Department of Defense (DOD) Directives and Instructions

- DOD Instruction (DODI) 4715.6, *Environmental Compliance*. This instruction, dated 24 April 1996, implements policy, assigns responsibility, and prescribes procedures for achieving compliance with applicable Executive Orders (EO) and Federal, state, interstate, regional, and local statutory and regulatory environmental requirements. This DODI also designated the DOD Executive Agents to lead DOD implementation of key environmental issues. This DODI does not apply to the operations of U.S. military aircraft or to off-installation operational and training deployments. The Executive Agent for *Federal Water Pollution Control Act* is the Navy.

C. Using the TEAM Guide for ECAMP

- Review records for analysis of used oil to determine whether or not it is a hazardous waste.
- Review disposal records for used oil.
- Review the SPCC and training records for the spill response team and pertinent shop personnel.
- Visit maintenance areas, service stations, fueling points to identify if POL products are correctly stored.

D. Key Air Force/DOD Compliance Requirements

- None.

E. Key Compliance Personnel

- Base Environmental Protection Committee (EPC). The EPC is usually responsible for drafting and reviewing the spill prevention and response (SPR) plan prior to its promulgation by the Base Commander and for the annual review and update of the SPR plan. Often, the EPC delegates the specific preparation of the plan to the Base Civil Engineering (BCE) for implementation by the Base Environmental Manager (EM). The EPC also is responsible for review and implementation of the Installation Plan for recoverable and waste petroleum.
- Spill Response Team (SRT). The SRT is tasked to respond to spills when requested by an On-Scene Commander (OSC) and to perform spill containment, recovery, cleanup, disposal, and restoration activities as directed by the OSC. The SRT is a multidisciplinary team often including the following persons: BCE, Base Environmental Manager, Bioenvironmental Engineer (BEE), Base Disaster Preparedness Officer (BDPO), Fire Chief, Security Police Chief, Public Affairs Officer (PAO), Base Fuels Flight Commander, Safety Chief, and Staff Judge Advocate (JA).
- Base Fire Department. The fire department provides support in emergency response, spill events, exercises, and fire protection activities. In addition, the department will be responsible for making periodic fire safety inspections of flammable or combustible storage and handling areas, hazardous waste storage areas, and accumulation points on the installation.
- Installation Chief of Safety. The Installation Chief of Safety is responsible for ensuring workplace occupational and environmental safety and health inspections and program evaluations are conducted. When discrepancies are discovered in the handling and storage of hazardous materials (including POL), the findings and recommended corrective actions will be noted in the report and forwarded to the appropriate manager and the hazardous materials program manager. The installation safety staff is responsible for participating in the investigation of all hazardous materials mishaps and reporting those which result in injury or property damage.
- Base Fuels Management Officer (BFMO). The BFMO is responsible for the safe and efficient receipt, storage, handling, issuing, and accounting of all petroleum products to include all general operations and inspections.
- The BCE. The BCE is responsible for the maintenance of all installed petroleum storage and dispensing systems. This responsibility often is discharged by the Liquid Fuels Maintenance (LFM) shop. The BCE also is responsible for the calibration of permanently installed meters.
- Base EM. The EM monitors all POL activities that may affect the environment and usually is responsible for the coordination of the EPC review and updates of the SPR plan. The EM also often coordinates the reportable spills notification of appropriate Federal and state agencies on behalf of the Base OSC. Generally, the EC comes under the BCE.
- The BEE. The BEE takes samples to determine the chemical nature, pollutant concentration, and extent of each reportable quantity spill as required for response actions and documentation.
- The BDPO. The BDPO is responsible for emergency planning and training of installation disaster response forces. When appointed as *Emergency Planning and Community Right-to-Know Act* (EPCRA) coordinator, the BPDO will exchange emergency response plans with the LEPC and participate in LEPC meetings.
- Fuels Environmental Coordinator - This is a position assigned by the BFMO to ensure POL operations are accomplished in accordance with federal, state, local and environmental laws. The Fuels environmental coordinator consults with the installation EM, BCE, BEE, and EPC.

F. Key Air Force/DOD Compliance Definitions

- *Area Fuels Laboratory* - provides testing services to installations on samples of petroleum and related products. Conducts specification tests to determine the quality of the petroleum products under procurement and in the Air Force supply system (AFI 23-201, Attachment 5, Section B).
- *Bulk Petroleum Products* - liquid petroleum products transported by various means and stored in tanks or containers having an individual fill capacity greater than 250 L (AFI 23-201, Attachment 5, Section B).
- *Contaminated Product* - an off-specification product resulting from mixing with another product or products of different type and grade or by introduction of foreign matter such as rust, dirt, or water (AFI 23-201, Attachment 5, Section B).
- *Defueling* - types of defueling are (AFI 23-201, Attachment 5, Section B):
 1. hot defueling which is single point defueling of aircraft with one engine running
 2. cold defueling which is conventional defueling of aircraft which do not have an engine running.
- *Ground Products* - those refined petroleum products normally intended for use in administrative, combat, and tactical vehicles, material handling equipment; special purpose vehicles; and stationary power and heating equipment (AFI 23-201, Attachment 5, Section B).
- *Hazardous Waste* - any petroleum product when mixed with a hazardous substance and designated as waste. Hazardous waste must be stored, transported, and disposed of in accordance with Federal, state, and local environmental laws (AFI 23-201, Attachment 5, Section B).
- *Hazardous Waste Fuel* - a waste petroleum product that is mixed with hazardous waste or exhibits characteristics of hazardous waste as defined by the 40 CFR 261 (AFI 23-502, Attachment 1).
- *Hydrant* - that portion of a pump system which can provide 600 to 1200 gal/min (minus line and friction loss) through an outlet into an aircraft (AFI 23-201, Attachment 5, Section B).
- *Off-Specification Product* - product which has one or more off-specification characteristics (e.g., color, vapor pressure, flash point). Off-specification products can be blended as regraded products. Off-specification products are not identified as hazardous waste fuel (AFI 23-502, Attachment 1).
- *On-Specification Product* - product of suitable quality for return to the installation inventory. TO 42B-1-23, Table 3-1, *Management of Recoverable and Waste Liquid Petroleum Products*, sets the criteria for suitable quality. Do not consider as off-specification if the presence of solids and water can be removed by rotation through on-hand separators (AFI 23-502, Attachment 1).
- *Recoverable Products* - products that still have useful physical or chemical properties (AFI 23-502, Attachment 1).
- *Recyclable Products* - products determined to be surplus to Air Force needs that are burned for energy recovery (e.g., JP-4 contaminated with hydraulic fuel (fail color specifications) and used lubricating oil are recyclable products when burned for energy recovery as a fuel). Many products are recycled by sale through DRMO (AFI 23-502, Attachment 1).
- *Reprocessing* - refining, clay filtering, or naphtha injection to bring off-specification product up to specification (AFI 23-502, Attachment 1).
- *Unusable Petroleum Product* - product that is no longer suitable for any use on an installation due to excessive concentration or quality degradation (AFI 23-502, Attachment 1).

G. Additional Records To Review

- Records of all spills, leaks, and associated site assessment/cleanup activities (for 3 yr)
- Official correspondence with state implementing agency

H. Additional Physical Features To Inspect

- Refueling facilities
- Washrack areas
- Fire training pits
- Auto hobby shops
- Spill equipment/Spill gates/ Skimmers

I. People To Interview

- Base Environmental Manager (EM)
- Fuels Environmental Coordinator
- Base Civil Engineer (BCE)
- Base Fuels Management Officer (BFMO)
- Liquid Fuels Maintenance (LFM)
- Base Bioenvironmental Engineer (BEE)
- Base Fire Department
- BCE Contract Management Officer
- Technical and Design Engineer
- Base Contracting Officer
- Interior Electric Shop/Base Cathodic Protection Engineer
- Contract Programmer
- Base Disaster Preparedness Officer

J. Guidance for Air Force Supplement POL Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	PO.1.1 through PO.1.7
Missing Checklist Item	PO.2.1
Discharges, Spills, and Releases	PO.15.1
POL Storage General	PO.20.1
Pipelines	PO.40.1 through PO.40.3
Used Oil	PO.60.1 and PO.60.2

<p align="center">COMPLIANCE CATEGORY: POL MANAGEMENT U.S. TEAM Guide: ECAMP Supplement</p>	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>PO.1</p> <p>ALL INSTALLATIONS</p> <p>PO.1.1. Copies of all relevant Federal, state, and local regulations on POL management should be maintained at the installation (MP) [Revised December 1997].</p> <p>PO.1.2. As a management practice, the BCE and BFMO should have a Memorandum of Agreement (MOA) pertaining to draining interior dike basins. This MOA should be signed by the BCE, and BFMO, and coordinated with the installation EM and BEE (MP).</p> <p>PO.1.3. Installations are required to have in place a program for managing recoverable and unusable liquid-petroleum products</p>	<p>Verify that a file of Federal and state POL, Spill Prevention, Control, and Counter measures (SPCC) plan (Spill Prevention), and Oil and Hazardous Substance Pollution Contingency (OHSPC) plan regulations are maintained and kept current at the installation:</p> <ul style="list-style-type: none"> - EO 12088, <i>Federal Compliance With Pollution Standards</i>. - 33 CFR 153, <i>Control of Pollution by Oil and Hazardous Substances, Discharge Removal</i>. - 40 CFR 110, <i>Discharge of Oil</i>. - 40 CFR 112, <i>Oil Pollution Prevention</i>. - 40 CFR 279, <i>Standards for the Management of Used Oil</i>. - 40 CFR 300, <i>National Oil and Hazardous Substances Pollution Contingency Plan</i>. - AFI 13-212, <i>Weapons Ranges</i>. - AFI 23-201, <i>Fuels Management</i>. - AFI 23-502, <i>Recoverable and Unusable Liquid Petroleum Products</i>. - AFM 85-16, <i>Maintenance of Petroleum Systems</i>. - TO 35-1-3, 36-1-3, 42B-1-1, 42B-1-23, and 00-25-172. - applicable state and local regulations. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the EPC informed as needed.</p> <p>(NOTE: This MP is based on guidelines found in AFM 85-16, Attachment 5.)</p> <p>Verify that an MOA has been prepared.</p> <p>Verify that the MOA was signed or coordinated through the installation EM and the BEE.</p> <p>Verify that copies of the MOA are on file at BFMO, LFM, BCE, Service Call Desk, EM, and BEE.</p> <p>(NOTE: This instruction applies to lubricating oils, aviation fuel, distillates, and gasoline.)</p> <p>Verify that the installation has a comprehensive program to manage the segregation and collection, reuse, or recycling of recoverable product and the</p>

COMPLIANCE CATEGORY: POL MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>(AFI 23-502, para 6.2 through 8.7).</p>	<p>disposition of unusable petroleum products.</p> <p>(NOTE: Documentation may be in the form of a plan or an installation operating instruction.)</p> <p>Verify that the program includes:</p> <ul style="list-style-type: none"> - specific responsibilities and criteria for collection, storing, returning to inventory, reusing, recycling, and disposing of all unusable petroleum products and hazardous waste fuels generated at the installation - the identity of generating activities by organization - a list of all recoverable and unusable products and hazardous waste fuels generated by an organization, including source, approximate quantity, and condition - specific responsibilities of installation organizations - the methods and facilities available to the installation to collect, store, return to inventory, reuse, recycle, and dispose of products - accounting procedures for recoverable and unusable petroleum products and procedures to credit organizations using the guidelines in AFMAN 23-110, <i>USAF Supply Manual</i> - specific installation and organizational procedures for the entry, exit, and control of unusable petroleum product vehicles. <p>(NOTE: The priorities for deposition of products are:</p> <ul style="list-style-type: none"> - return on-specification fuel to the installation inventory for use as the original grade - return off-specification fuel to the installation inventory and blend into the original or different grade making a regraded product - recycle products onsite by reusing it in secondary applications such as heating fuel - categorize any remaining products as surplus, send them as recyclable to DRMO and credit DRMO sales to the installation RRR account - contract with a service company to remove the waste from the installation for nonrecyclable waste.) <p>Verify that the BCE has developed procedures at the installation level for the disposal of petroleum products.</p> <p>Verify that generating activities have obtained enough containers to properly segregate and store recoverable and unusable products and hazardous waste fuel by product type.</p> <p>(NOTE: Once the generating activity decides to discard the fuel, rather than reuse, recover, or recycle, the fuel is to be managed as hazardous waste.)</p> <p>Verify that the generating activity submits data on the quantity and identity of</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
	recoverable and unusable petroleum product.
PO.1.4. All fuels elements are required to be evaluated at least once each 6 mo (AFI 23-201, para 8.7) [December 1996].	<p>Verify that the Quality Control and Inspection (QC&I) Supervisor evaluates each fuels element, except its own QC&I function, at least once each 6 mo (not to exceed 180 days).</p> <p>Verify that, if an element is observed to have a negative trend on a semi-annual assessment, it is revisited after 30 days, but within 45 days, to check each negative indicator found during the semi-annual assessment.</p> <p>Verify that QC&I personnel or the Quality Assurance Evaluator (QAE) perform at least 10 no-notice spot checks each week.</p> <p>Verify that QC&I personnel or the QAE spot check all shifts.</p> <p>Verify that spot checks are conducted during exercises and contingencies.</p> <p>(NOTE: Installations with fewer than 20 full-time fuels personnel may conduct as few as two no-notice spot checks per week.)</p>
PO.1.5. BFMO must appoint a Fuels Environmental Coordinator (AFI 23-201, para 1.5) [December 1996].	<p>Verify that BFMO has appointed a Fuels Environmental Coordinator.</p> <p>Verify that the Fuels Environmental Coordinator carries out the following functions:</p> <ul style="list-style-type: none"> - follows Federal, state, or local environmental regulation requirements and Air Force Policy Directives (AFPDs) and AFIs - consults with agencies (such as the EPC, Base Environmental Manager, BCE, BES, and Staff Judge Advocate (SJA)).
PO.1.6. BFMO must obtain and maintain certain equipment (AFI 23-201, para 1.14.1).	<p>Verify that BFMO obtains and maintains a vehicle washrack equipped with an oil-water separator and located within or near the refueling unit parking area.</p> <p>Verify that BFMO obtains and maintains a liquid degreasing machine capable of cleaning engines on mobile fueling equipment.</p> <p>Verify that the discharge from the degreaser drains into an oil/water separator.</p>
PO.1.7. The Fuels Management Flight Commander (FMFC) is required to perform specific	<p>Verify that the FMFC ensures that fuels personnel understand the base's hazardous material emergency planning and response plan.</p> <p>Verify that the FMFC notifies the base environmental manager of any changes in</p>

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<p>functions to ensure appropriate environmental management of fuel (AFI 23-201, Attachment 10, para A10.1) [December 1996].</p>	<p>fuels operations that may require an amendment to the HAZMAT plan.</p> <p>Verify that the FMFC ensures adequate spill prevention and clean-up materials are readily available.</p> <p>Verify that the FMFC develops local operating procedures for collection, segregation, storage, and disposition of waste and reusable bulk petroleum products according to AFI 23-502.</p>

COMPLIANCE CATEGORY: POL MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>PO.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>PO.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this checklist item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but no addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>PO.15</p> <p>DISCHARGES, SPILLS, AND RELEASES</p> <p>PO.15.1 The BFMO is required to report all spills or releases of fuel as soon as possible by phone and send follow-up messages (AFI 23-201, para 1.8) [December 1996]..</p>	<p>Verify that the BFMO is reporting spills and releases as soon as possible to the MAJCOM and DFP/DFR by telephone.</p> <p>Verify that a follow-up message is sent within 24 h to the MAJCOM with an information copy to HQ USAF/LGSP, DFSC-FQ and the applicable DFP/DFR.</p> <p>Verify that an advisory message is sent within 30 days to the MAJCOM with an information copy to USAF/LGSP on the outcome of the investigation and lessons learned.</p> <p>Verify that the BFMO coordinates with the installation EM on followup messages for reportable fuel spills.</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
POL STORAGE PO.20 General PO.20.1 Secondary containment is required to be provided for all loading and unloading facilities (AFI 23-201, Attachment 10, para A10.1) [December 1996].	<p>Verify that all loading and unloading facilities have secondary containment that is impermeable to petroleum products.</p> <p>Verify that drainage water from the secondary containment containing residual petroleum products or hazardous chemicals are appropriately contained and handled so it is not discharged directly to the environment.</p>

COMPLIANCE CATEGORY: POL MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>PO.40</p> <p>PIPELINES</p> <p>PO.40.1. Air Force operated offsite pipelines should be inspected at least once per week by air patrol and once a year by line walker or vehicle patrol (MP).</p> <p>PO.40.2. All Air Force operated above and under ground fuel piping systems at transfer operations, pumping, and in-plant processing operations should be managed according to specific parameters (MP).</p> <p>PO.40.3. All underground aviation fuel transfer pipelines should be subject to a hydrostatic pressure test on a 5-yr recurring basis (MP).</p>	<p>(NOTE: This MP is based on guidance found in AFM 85-16, Chapter 8.)</p> <p>Verify that weekly inspections have been performed by inspecting records.</p> <p>Verify, through interview and records search, that any detected leaks were reported and leaking pipes repaired or replaced.</p> <p>Verify that pressure tests have been conducted once a year. Check under remarks section of AF Form 172 if the testing pressure was maintained during the 2-h period.</p> <p>Determine if confirmed leaks have been reported and leaking pipes repaired or replaced.</p> <p>Determine if pipelines are walked at least twice a year and any suspicious circumstances lead to immediate investigation to include pressure testing of the line and excavation if soil conditions permit.</p> <p>(NOTE: This MP is based on guidance outlined in AFM 85-16, Chapter 8.)</p> <p>(NOTE: This MP is based on guidance outlined in AFM 85-16, Chapter 8.)</p> <p>Verify that hydrostatic pressure tests were conducted as required by reviewing attachments to AF Form 172 and interviewing LFM personnel.</p> <p>Verify that detected leaks were corrected through repair or replacement by inspecting test results.</p> <p>Determine if 150 percent of normal pressure was maintained during the 4-h test period by reviewing the remarks section of AF Form 172.</p>

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<p>PO.60</p> <p>USED OIL</p> <p>PO.60.1. BFMO has specific responsibilities with regard to the management of waste fuel (AFI 23-201, Attachment 10, para A10.2) [December 1996].</p> <p>PO.60.2. Accumulation points must be set up for used petroleum products generated as part of the operation and maintenance of air-to-surface weapons ranges (AFI 13- 212, para 1.10.2.1).</p>	<p>Verify that BFMO:</p> <ul style="list-style-type: none"> - designates interim storage and final disposition locations and procedures for off-specification bulk products and product-water mixtures under fuels management control - does not use installed hydrants, storage sumps, or slop tanks to collect or store waste fuels - obtains written MAJCOM approval to use stock listed vehicles and trailers for the collection and transport of waste fuels or oils - clearly marks and completely isolates the tanks and equipment used for waste products from active product storage and equipment to prevent contamination - ensures that there is direct supervision when waste materials are delivered to waste product tankage in the fuels area by the generating activity - trains fuels personnel who handle hazardous waste. <p>Determine whether the installation operates air-to-surface weapons ranges that generate used petroleum products.</p> <p>Verify that accumulation points have been set up for such weapons ranges.</p> <p>Verify that arrangements have been made for periodic transport of such products to a storage facility.</p>

SECTION 9

SOLID WASTE MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 32-7042, *Solid and Hazardous Waste Compliance*. This AFI, dated 12 May 1994, contains requirements for solid and hazardous waste management, planning, training, collecting, and disposal.
- AFI 32-7080, *Pollution Prevention Program*. This AFI, dated 12 May 1994, addresses how the recycling programs at installations are to be operated.

B. Department of Defense (DOD) Directives and Instructions

- DOD Instruction (DODI) 4715.4, *Pollution Prevention*. This instruction, dated 18 June 1996, implements policy, assigns responsibilities, and prescribes procedures for implementation of pollution prevention programs throughout DOD. The DODI was amended by a 13 May 1998 DUSD Memorandum titled *New Pollution Prevention Measure of Merit*. In this DODI the Navy has been designated the Executive Agent for ozone depleting substances. It is specifically stated that this DODI is applicable to GOCOs and facilities supported by appropriated and nonappropriated funds. The DODI and amending Memorandum additionally established the following DOD Pollution Prevention Measures of Merit **[Revised July 1999]**:
 1. By the end of calendar year (CY) 1999, reduce total releases and offsite transfers of toxic chemicals 50 percent from the 1994 toxic release inventory baseline. The amount of toxic releases and offsite transfers will be measured and reported in pounds.
 2. By the end of CY 1999, reduce the disposal of hazardous waste 50 percent from the 1992 baseline. The amount of hazardous waste disposal will be measured and reported in pounds.
 3. By the end of FY 2005, ensure the diversion rate for non-hazardous solid waste is greater than 40% , while ensuring integrated non-hazardous solid waste management programs provide an economic benefit when compared with disposal using landfilling and incineration alone

This DODI does not apply to procurement, use, generation, storage, processing, disposal, or management in any sense for radioactive materials. It also does not apply to the civil works function of the Department of the Army.

C. Using the TEAM Guide for ECAMP

- Review contracts for solid waste disposal and/or recycling haulers.
- Go dumpster diving to look for recyclables and hazardous wastes in the trash.
- Determine how plant waste is disposed of and if it is composted onsite, visit the composting area.
- Review any landfill permits for disposal onsite and ensure the on base landfill is operating correctly,

D. Key Air Force/DOD Compliance Requirements

- Plans - The installation is required to have a Solid Waste Management Plan that details the solid waste technologies in use onsite, includes an inventory of solid waste streams, and an evaluation of any onsite landfills (AFI 32-7042, para 3.2).
- Storage/Collection - Installations are required to inspect solid waste collection, transfer, and disposal facilities on a scheduled and unscheduled basis. Installation personnel are required to be periodically informed as to what can and cannot be put into the trash receptacles (AFI 32-7042, para 3.5.1 and 3.5.2).
- Recycling - Air Force installations are required to procure material containing recycled materials and report the amount purchased each year (AFI 32-7080, para 3.4 and 3.5). Recycling programs are required to meet specific parameters concerning which materials can and cannot be recycled (DODI 4715.4, para F2(c)(3)).
- Composting - Installations are required to operate a composting program or participate in a regional composting program if it is practicable to do so (DODI 4715.4, para F2(c)(4)).
- Specific Wastes - Bulky wastes must be disposed of according to certain methods, which differ depending of the type of waste (i.e., automobile bodies, furniture and appliances are required to be salvaged, or crushed and pushed onto working face near the bottom of the cell). Water treatment plant sludges, containing no free moisture, and digested or heat treated wastewater treatment plant sludges must be disposed of by covering them with soil or municipal solid wastes. Incinerator and air pollution control residues must be disposed of by covering them as necessary to prevent their becoming airborne.
- Land Disposal Site Operations Other Than a Municipal Solid Waste Landfill (MSWLF) - Recommendations for operating procedures are found in the 40 Code of Federal Regulations (CFR) 241. These recommendations have been made requirements in AFI 32-7042.
- Land Disposal Site Closure Other Than an MSWLF - Recommendations for closure procedures are found in 40 CFR 261. These recommendations have been made requirements in AFI 32-7042.
- New Landfills Other Than MSWLFs - Recommendations for new landfills are found in 40 CFR 261. These recommendations have been made requirements in AFI 32-7042.
- Thermal Processing Facilities - Recommendations for thermal processing facilities are found in the 40 CFR 240. These recommendations have been made requirements in AFI 32-7042.

E. Key Compliance Personnel

- Base Environmental Manager (EM). The EM acts for the Environmental Protection Committee (EPC) to ensure the overall management of the installation's environmental program is a coordinated effort in line with Federal, state, and local guidelines and DOD and Air Force Directives.
- Base Civil Engineering (BCE). The BCE is responsible for site location, licensing, construction, and operation of onsite landfills, and for storing and transporting of solid wastes to either onsite or offsite disposal activities.
- Base Bioenvironmental Engineer (BEE). The BEE is responsible for compliance sampling data at onsite landfills and for reviewing and coordinating asbestos disposal plans and operations.

F. Key Air Force/DOD Compliance Definitions

- *Composting* - a controlled process for managing the degradation of plant and other organic wastes to produce a useful product that can be used as mulch or soil conditioner (DODI 4715.4, Enclosure 3).
- *Excluded Materials* - excluded materials may not be sold through a qualified recycling program, and the proceeds from their sale shall not be returned to a qualified recycling program. Excluded items include, but are not limited to (DODI 4715.4, Enclosure 3):
 1. government furnished material
 2. precious metal bearing scrap
 3. hazardous waste (including household hazardous waste)
 4. ozone depleting substances
 5. electrical components
 6. unopened containers of solvents, points, or oils
 7. fuels
 8. material that can be sold (as is) as a usable item
 9. repairable items that may be used again for their original purposes of functional (e.g., used vehicles, vehicle or machine parts)
 10. ships, aircraft, weapons, and other material required to be demilitarized or mutilated and scrap resulting from demilitarization
 11. all Munitions List Item (MLI) and Strategic List Items (SLI), except firing range expended brass and mixed metals gleaned from firing range cleanup
 12. types of surplus personal property whose sales proceeds may be deposited to accounts other than a qualified recycling program:
 - a. scrap generated from Defense Business Operations Fund (DBOF) activities
 - b. usable personal property purchased by DBOF activities
 - c. property purchased with commissary surcharge funds
 - d. automatic data processing equipment owned by the GSA
 - e. property purchased for the Military Assistance Program or purchased with Foreign Military Sales Administrative funds
 - f. Coast Guard property
 - g. property owned by nonappropriated fund activities
 - h. lost, abandoned, or unclaimed privately owned personal property
 - i. property owned by a country or international organization
 - j. bones, fats, and meat trimmings generated by a commissary.
- *Government Furnished Material* - property that may be incorporated into or attached to a deliverable end item or that may be consumed or expensed in performing a contract. It includes assemblies, component parts, raw and processed materials, and small tools and supplies that may be consumed in normal use in performing a contract (DODI 4715.4, Enclosure 3).
- *Other Qualified Recycling Program Materials* - materials that fit neither the definition of recyclable material nor the definition of excluded materials are classified as other qualified recycling program materials (DODI 4715.4, Enclosure 3).
- *Qualified Recycling Program (QRP)* - organized operations that require concerted efforts to divert or recover scrap or waste, as well as efforts to identify, segregate, and maintain the integrity of the recyclable materials in order to maintain or enhance their marketability. If the program is administered by a DOD component, a QRP includes adherence to a control process providing accountability for all materials processed through program operations (DODI 4715.4, Enclosure 3).

- *Recovered Material* - waste materials and by-products that have been recovered or diverted from solid waste, but such term does not include those materials and by-products generated from and commonly reused within, an original manufacturing process (DODI 4715.4, Enclosure 3).
- *Recyclable Materials* - recyclable materials can include, but are not be limited to: high-quality paper and paper products; mixed paper; newspaper; cardboard; plastic; metal cans; glass; used oil (except when hazardous waste); batteries; and tires. In addition, scrap (including ferrous and nonferrous scrap) and firing range expended brass and mixed metals gleaned from firing range cleanup that do not require demilitarization may be included in a qualified recycling program (DODI 4715.4, Enclosure 3).
- *Recycling* - the series of activities, including collection, separation, and processing by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion (DODI 4715.4, Enclosure 3).
- *Source Reduction* - as defined in the PPA, source reduction is any practice that (DODI 4715.4, Enclosure 3):
 1. reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, and disposal
 2. reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term includes equipment or technology modification, process or procedure modification, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. Source reduction does not entail any form of waste management (e.g., recycling and treatment).
- *Waste Minimization* - source reduction and the following types of recycling (DODI 4715.4, Enclosure 3):
 1. beneficial use/reuse
 2. reclamation.

Waste minimization does not include recycling activities whose uses constitute disposal and burning for energy recovery.

G. Additional Records To Review

- Documentation of locations (map) and descriptions of all nonhazardous waste storage and disposal facilities
- Records of operational history of all active and inactive disposal facilities

H. Additional Physical Features To Inspect

- Resource Recovery Facilities

I. People To Interview

- Base Environmental Manager (EM)
- Base Civil Engineer (BCE)
- Base Bioenvironmental Engineer (BEE)

J. Guidance for Air Force Supplement Solid Waste Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	SO.1.1 through SO.1.6
Missing Checklist Items	SO.2.1
Miscellaneous Requirements (NOTE: The checklist items originally in SO.4 have been moved to SO.1.)	SO.4.1 and SO.4.2
Storage and Collection of Solid Waste	SO.10.1
Recycling	SO.25.1 through SO.25.3
Land Disposal Sites Other Than MSWLFs	
Specific Wastes	SO.30.1 through SO.30.3
Operations	SO.35.1 through SO.35.9
Closure	SO.40.1
Site Criteria For New Landfills	SO.45.1
Thermal Processing Facilities	SO.90.1 through SO.90.9
Composting	SO.165.1

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<p>SO.1.3. The Solid Waste Management Plan should contain the strategy for achieving the Air Force Pollution Prevention Objective to reduce solid waste disposal by 50 percent by 1997 (MP).</p>	<p>Verify that the plan contains the strategy for achieving the Air Force Pollution Prevention Objective to reduce solid waste disposal by 50 percent by 1997.</p>
<p>SO.1.4. The installation's solid waste management program is required to include scheduled and unscheduled inspections of solid waste collection, transfer, and disposal facilities (AFI 32-7042, para 3.5).</p>	<p>Verify that scheduled and unscheduled inspections of collection, transfer, and disposal facilities are done.</p> <p>Verify that findings are documented and corrective actions implemented promptly.</p> <p>Verify that each installation inspects industrial shop wastes to confirm that hazardous waste is not deposited and records of these inspections are retained for 2 yr from the date of inspection.</p>
<p>SO.1.5. Installations should verify with an appropriate regulatory agency that offsite land fills are being operated in general conformance with permit conditions and applicable regulations (MP) [Moved April 1999].</p>	<p>Determine, through interviews and records reviews, if verification with regulators has been made.</p> <p>(NOTE: This was originally checklist item number SO.4.1. It was moved to facilitate consistency between TEAM manuals.)</p>
<p>SO.1.6. Solid wastes will be disposed of at regional or municipal facilities wherever practical (AFI 32-7042, para 3.4.2) [Moved April 1999].</p>	<p>Verify that proper efforts have been made to use regional waste disposal facilities.</p> <p>(NOTE: This was originally checklist item number SO.4.2. It was moved to facilitate consistency between TEAM manuals.)</p>

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SO.2 MISSING CHECKLIST ITEMS SO.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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<p>SO.4</p> <p>MISCELLANEOUS REQUIREMENTS</p> <p>SO.4.1. Checklist item moved [Moved April 1999].</p> <p>SO.4.2. Checklist item moved [Moved April 1999].</p>	<p>(NOTE: This was moved to checklist item number SO.1.5. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number SO.1.6. It was moved to facilitate consistency between TEAM manuals.)</p>

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<p>SO.10</p> <p>STORAGE AND COLLECTION OF SOLID WASTE</p> <p>SO.10.1. Installation personnel are required to be periodically informed about materials that are prohibited from disposal in solid waste receptacles (AFI 32-7042, para 3.5.4.2).</p>	<p>Determine if a program exists at the installation to keep personnel informed about proper waste disposal practices.</p>

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<p align="center">REGULATORY REQUIREMENTS</p>	<p align="center">REVIEWER CHECKS: September 1999</p>
<p>SO.25</p> <p>RECYCLING</p> <p>SO.25.1. Installations are required to follow specific recycling program procedures (AFI 32- 7080, para 3.4) [December 1996].</p>	<p>Verify that the installation has a single qualified recycling program to serve all Air Force and all tenant organizations occupying space on the installation, including leased space.</p> <p>Verify that contracts awarded to GOCOs after 20 October 1993 include provisions that obligate the contractor to participate with a DOD installation or establish their own qualified recycling program.</p> <p>Verify that the installation has a qualified recycling program manager.</p> <p>Verify that AAFES and the Commissary coordinate their recycling efforts with the recycling program manager.</p> <p>Verify that, where practical, the installation recycles the following, where practical, at a minimum:</p> <ul style="list-style-type: none"> - metals - plastic - glass - used oil - lead acid batteries - tires - high quality copier paper - cardboard - newspaper. <p>Verify that a municipal solid waste recycling and disposal report, RC: HAF-CEV(Q)9424 is released quarterly to the Air Staff within 45 days of the end of the quarter.</p> <p>(NOTE: This report can be discontinued during emergency conditions.)</p>
<p>SO.25.2. Installations are required to follow specific procurement procedures (AFI 32-7080, para 3.5).</p>	<p>Verify that the installation reviews and revises specifications for the designated items to allow procurement of products containing recovered materials.</p> <p>(NOTE: The designated items include paper, retread tires, building insulation, cement/concrete containing fly ash, and re-refined oils.)</p> <p>Verify that all of the following elements of an affirmative procurement program exists:</p>

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<p>SO.25.3. Installations are required, where cost effective, to establish recycling programs and procedures (DODI 4715.4, para F2(c)(3)) [December 1996].</p>	<ul style="list-style-type: none"> - a preference program - a promotion plan - procedures requiring vending and contractors to estimate and certify the recovered materials content of the designated items they sell to the installation or use in construction projects on the installation - annual review of the effectiveness of the program. <p>Verify that an affirmative procurement purchases report (dollar amounts), RCS; HAF-CEV(Q)9424 is released quarterly to Air Staff within 45 days after the end of each quarter.</p> <p>(NOTE: This report can be discontinued during emergency conditions.)</p> <p>Verify that, if cost effective, the installation has a recycling program and procedures in place that:</p> <ul style="list-style-type: none"> - ensure the installation and all activities, including host and tenant organizations occupying space on the installation, have qualified recycling programs - ensure contracts awarded after 18 June 1996 that provide for contractor operation of a government-owned or leased facility include provisions that obligate the contractor to participate in a recycling program - ensure QRP procedures address recyclable materials, excluded materials, and other qualified recycling program materials (see definitions) - divert recyclable materials from the nonhazardous solid waste stream where economically feasible - establish controls to ensure excluded materials are not sold through a qualified recycling program - authorize installation commander, as appropriate, to sell directly recyclable and other QRP materials or to consign them to DRMS for sale - ensure distribution of recycling proceeds is consistent with 10 USC 2577.

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<p>LAND DISPOSAL SITES OTHER THAN MSWLFs</p> <p>SO.30 Specific Wastes</p> <p>SO.30.1. Bulky wastes are required to be disposed of according to certain methods (AFI 32- 7042, para 3.4.1).</p> <p>SO.30.2. Water treatment plant sludges containing no free moisture and digested or heat treated wastewater treatment plant sludges are required to be disposed of according to certain methods (AFI 32-7042, para 3.4.1).</p> <p>SO.30.3. Incinerator and air pollution control residues are required to be disposed of according to certain methods (AFI 32- 7042, para 3.4.1).</p>	<p>Verify that automobile bodies, furniture, and appliances are either salvaged or crushed and pushed onto the working face near the bottom of the cell.</p> <p>Verify that demolition and construction debris, tree stumps, and large timbers are pushed onto the working face near the bottom of the cell.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 241-200-3(b).)</p> <p>Verify that water treatment plant sludges containing no free moisture and digested or heat treated wastewater treatment plant sludges are covered with soil or solid wastes.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements the recommendations found in 40 CFR 241.200-3(d).)</p> <p>(NOTE: These requirements apply only if the plant sludges are determined to be nonhazardous solid wastes.)</p> <p>Verify that incinerator and air pollution control residues are incorporated into the face and covered as necessary to prevent them from becoming airborne.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 241.200-3(e).)</p> <p>(NOTE: These requirements apply only if the incinerator and air pollution control residues are determined to be nonhazardous solid wastes.)</p>

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<p>acceptable, specific practices are required to be followed (AFI 32- 7042, para 3.4.1).</p> <p>SO.35.5. Installations are required to place cover material at the end of each operating day (AFI 32-7042, para 3.4.1).</p> <p>SO.35.6. Cover material are required to be applied according to specific recommendations (AFI 32-7042, para 3.4.1).</p> <p>SO.35.7. Compaction of wastes and cover materials are required to be done according to recommended procedures</p>	<p>devices.</p> <p>Verify that wastes that are easily moved by wind are covered as necessary to prevent their becoming airborne.</p> <p>Verify that onsite vegetation is cleared only as necessary.</p> <p>Verify that natural windbreaks are maintained.</p> <p>Verify that buffer strips and/or berms are used to screen the site from nearby residences and major roadways.</p> <p>Verify that salvage material is removed from the site frequently.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 208-3.)</p> <p>Verify that cover material is put in place at the end of each operating day.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations in 40 CFR 241-200-3(a).)</p> <p>Verify that cover material is applied daily regardless of weather.</p> <p>Verify that the thickness of the compacted daily cover is no less than 6 in.</p> <p>Verify that intermediate cover is applied on areas where additional cells are not to be constructed for extended periods of time.</p> <p>Verify that final cover is applied on each area as it is completed or if the area is to remain idle for over 1 yr.</p> <p>Verify that the surface grade promotes surface water runoff without erosion to minimize infiltration.</p> <p>Verify that intermediate cover is at least 1-ft thick and final cover is at least 2-ft thick.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 209-3.)</p> <p>Verify that, on any operating day, municipal solid waste handling equipment is capable of performing the following functions:</p> <ul style="list-style-type: none"> – spread solid waste in layers no more than 2-ft thick while confining it to the

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<p>(AFI 32-7042, para 3.4.1).</p> <p>SO.35.8. Specific health and safety procedures are required to be followed in order to protect personnel at land disposal sites (AFI 32-7042, para 3.4.1).</p> <p>SO.35.9. Records being maintained at land disposal site are required to cover specific topics (AFI 32-7042, para 3.4.1).</p>	<p>smallest practicable area</p> <ul style="list-style-type: none"> - compact the solid wastes to the smallest practicable volume - place, spread, and compact the cover material daily. <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 241.210-3.)</p> <p>Verify that a safety manual is available to employees.</p> <p>Verify that personal safety devices, such as hearing and eye protection, are provided to installation employees.</p> <p>Verify that equipment is provided with safety devices.</p> <p>Verify that provisions to extinguish fires exist.</p> <p>Verify that communications equipment is available onsite.</p> <p>Verify that scavenging is prohibited.</p> <p>Verify that access to the site is controlled.</p> <p>Verify that traffic signs or markers are provided to promote an orderly traffic pattern to and from the discharge area.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 241.211-2 and 241.211-3.)</p> <p>Verify that records are maintained and cover at least:</p> <ul style="list-style-type: none"> - major operational problems, complaints, or difficulties - results of leachate sampling and analyses - results of gas sampling and analyses - results of groundwater and surface water quality sampling and analyses upstream and downstream of the site - vector control efforts - dust and litter control efforts - quantitative measurements of the solid wastes handled - description of solid waste materials received. <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 241.212-3(a).)</p>

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LAND DISPOSAL SITES OTHER THAN MSWLFs SO.40 Closure SO.40.1. Upon closure of a site, a detailed description is required to be recorded with the area's land recording authority (AFI 32-7042, para 3.4.1).	<p>Verify that, upon closure of a site, a detailed description is recorded with the area's land recording authority.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 241.212-3(b).)</p>

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<p>SO.45</p> <p>SITE CRITERIA FOR NEW LANDFILLS</p> <p>SO.45.1. New landfills are required to meet certain location and design criteria (AFI 32-7042, para 3.4.1).</p>	<p>Verify that the hydrogeology of the site has been evaluated.</p> <p>Verify that onsite soil characteristics have been evaluated.</p> <p>Verify that environmental factors, climatological conditions, and socioeconomic factors have been considered in site selection.</p> <p>Verify that the site is easily accessible to vehicles.</p> <p>Verify that the site location will not attract birds and pose a hazard to low-flying aircraft.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements recommendations found in 40 CFR 241.202-2.)</p>

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<p>SO.90</p> <p>THERMAL PROCESSING FACILITIES</p> <p>SO.90.1. Installations with thermal processing facilities designed to process or are processing 50 tons or more per day of municipal solid wastes are required to provide specific areas for special wastes while they await processing (AFI 32-7042, para 3.4.1).</p> <p>SO.90.2. Installations with thermal processing facilities designed to process or which are processing 50 tons or more per day of municipal solid wastes are required to train personnel in any unusual handling required by acceptance of special wastes (AFI 32-7042, para 3.4.1).</p> <p>SO.90.3. Installations with thermal processing facilities designed to process or which are processing 50 tons or more per day of municipal solid wastes are required to inform regular users about materials which are excluded (AFI 32-7042, para 3.4.1).</p> <p>SO.90.4. Installations with thermal processing facilities designed to process or which are processing 50 tons or more per day of municipal solid wastes are required to</p>	<p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that storage areas for bulky wastes, digested and dewatered sludges from wastewater treatment facilities, raw sewage sludges, and septic tank pumpings are clearly marked.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a), 240.200-2(b), and 240.200-3(a).)</p> <p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that personnel are thoroughly trained to handle bulky wastes, digested and dewatered sludges from wastewater treatment facilities, raw sewage sludges, and septic tank pumpings.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a) and 240.200-3(b).)</p> <p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that regular users are given a list of excluded materials.</p> <p>Verify that a list of excluded materials is posted prominently at the facility.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a) and 240.201-3(a).)</p> <p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that there is an operating plan which specifies procedures and precautions to be taken if unacceptable wastes are delivered to or left at the facility.</p>

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<p>have certain procedures and precautions to deal with unacceptable wastes which are delivered to or left at the facility (AFI 32-7042, para 3.4.1).</p> <p>SO.90.5. Installations with thermal processing facilities designed to process or which are processing 50 tons or more per day of municipal solid wastes are required to meet certain site selection criteria (AFI 32-7042, para 3.4.1).</p> <p>SO.90.6. Installations with thermal processing facilities designed to process or which are processing 50 tons or more per day of municipal solid wastes are required to dispose of residue and other solid waste products resulting from the thermal process in an environmentally acceptable manner (AFI 32-7042, para 3.4.1).</p> <p>SO.90.7. Installations with thermal processing facilities designed to process or which are processing 50 tons or more per day of municipal solid wastes are required to be designed, operated, and maintained in a manner to protect the health and safety of personnel (AFI 32-7042, para 3.4.1).</p>	<p>Verify that operating personnel are thoroughly trained in such procedures.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a) and 240.201-3(b).)</p> <p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that the facility is located in an area zoned for industrial use and has adequate utilities to serve it.</p> <p>Verify that the site is accessible by permanent roads leading from the public road system.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a), 240.202-2(a), and 202-2(b).)</p> <p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that the furnace operator records the estimated percentage of unburned combustibles in a log.</p> <p>Verify that, if residue or fly ash is collected in a wet condition, it is drained of free moisture.</p> <p>Verify that residue and fly ash are transported by means that prevent the loads from shifting, falling, or blowing from the container.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a), 240.208-1, 202-208-2, and 208-3.)</p> <p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that procedures are developed for operation in emergency situations.</p> <p>Verify that approved respirators or self-contained breathing apparatus are available at convenient locations.</p> <p>Verify that training in first aid practices and emergency procedures is given to all personnel.</p> <p>Verify that personal safety devices are provided to all personnel.</p> <p>Verify that any regular user or employee that poses a safety hazard is barred from</p>

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<p>SO.90.8. Installations with thermal processing facilities designed to process or which are processing 50 tons or more per day of municipal solid wastes are required to follow certain general operation criteria (AFI 32-7042, para 3.4.1).</p>	<p>the facility and reported to the responsible agency.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a), 240.209-1, 202-209-2, and 209-3.)</p> <p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that the facility supervisor is experienced in the operation of the type of facility designed.</p> <p>Verify that alternate and standby disposal and operating procedures are established for implementation during emergencies, air pollution episodes, and shutdown periods.</p> <p>Verify that a routine maintenance schedule is established.</p> <p>Verify that engineering drawings are updated as the facility is modified.</p> <p>Verify that key operational procedures are prominently posted.</p> <p>Verify that equipment manuals, catalogs, parts lists, and spare parts are readily available at the facility.</p> <p>Verify that training opportunities are available for personnel.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a) and 240.210-3.)</p>
	<p>(NOTE: This does not apply to hazardous, agricultural, or mining wastes.)</p> <p>Verify that extensive monitoring and recordkeeping is practiced during:</p> <ul style="list-style-type: none"> - the first 12 to 18 mo of operation of a new or renovated facility - periods of high air pollution - periods of upset conditions at the facility. <p>Verify that operating records are kept in a daily log and include as a minimum:</p> <ul style="list-style-type: none"> - the total weight and volume of solid waste received during each shift, including the number of loads received, the ownership or specific identity of delivery vehicles, and the source and nature of the solid wastes accepted - furnace and combustion chamber temperatures recorded at least every 60 min and as changes are made, including explanations for abnormally high and low temperatures - rate of operation, such as grate speed

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	<ul style="list-style-type: none"> - weights of bottom ash, grate siftings, and fly ash (individually or combined) recorded at intervals appropriate to normal facility operation - estimated percentages of unburned material in the bottom ash - water used on each shift for bottom ash quenching and scrubber operation (NOTE: Representative samples of process waters should be collected and analyzed as recommended by the responsible agency.) - power produced and utilized each shift - overfire and underfire air volumes and pressure and distribution recorded at least every 60 min and as changes are made - if steam is produced, quality, production totals, and consumption rates should be recorded - auxiliary fuel used each shift - gross calorific value of daily representative samples of bottom ash, grate siftings, and fly ash (NOTE: Sampling time should be varied so that all shifts are monitored on a weekly basis.) - required emission measurements and laboratory analyses - complete records of monitoring instruments - problems encountered and methods of solution. <p>Verify that an annual report is prepared and that it includes the following information:</p> <ul style="list-style-type: none"> - minimum, average, and maximum daily volume and weight of waste received and processed, summarized on a monthly basis - a summary of the laboratory analyses including at least monthly averages - number and qualifications of personnel in each job category - total man hours per week - number of state certified or licensed personnel - staffing deficiencies - serious injuries, their cause, and preventive measures instituted - an identification and brief discussion of major operational problems and solutions - adequacy of operation and performance with regard to environmental requirements, the general level of housekeeping and maintenance, testing and reporting proficiency, and recommendations for corrective actions - a copy of all significant correspondence, reports, inspection reports, and any other communications from enforcement agencies. <p>Verify that a methodology for evaluating the facility's performance has been developed.</p> <p>(NOTE: AFI 32-7042, para 3.4.1, implements guidelines published in 40 CFR 240.100(a), 240.211-2, and 240.211-3.)</p>

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SO.165 COMPOSTING SO.165.1. Installations are required to operate a composting program or participate in a regional composting program if practicable to do so (DODI 4715.4, para F2(c)(4)) [December 1996].	Verify that the installation is operating a composting program or participating in a regional composting program if practicable to do so.

SECTION 10

STORAGE TANK MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 23-201, *Fuels Management*. This instruction, dated 1 October 1996, provides policy and procedures for fuels operations. If this instruction is in conflict with a Technical Order (TO), the TO takes precedence.
- AFI 23-204, *Organizational Fuel Tanks*. This AFI, dated 27 April 1994, provides guidelines and procedures for establishing and operating organizational fuel tanks.
- AFI 32-7044, *Storage Tank Compliance*. This instruction, dated 25 April 1994, identifies compliance requirements for underground and aboveground storage tanks (USTs and ASTs) and associated piping that store petroleum and hazardous substances except hazardous waste.
- Air Force Manual (AFM) 85-5, *Maintenance and Operation of Cathodic Protection Systems*. This manual provides guidance for maintenance and operation of cathodic protection systems.
- AFM 85-16, *Maintenance of Petroleum Systems*. This manual governs the maintenance of permanently installed storage and dispensing systems for petroleum and unconventional fuels.

B. Department of Defense (DOD) Directives and Instructions

- None that have not been implemented/superseded by AFIs.

C. Using the TEAM Guide for ECAMP

- Obtain a storage tank inventory (both aboveground and underground tanks).
- Review spill reporting records.
- Observe fill pipe areas for USTs.
- Observe ASTs for structural/operational compliance.

D. Key Air Force/DOD Compliance Requirements

- Airfield Hydrant Fuel Systems - It is recommended that airfield hydrant fuel systems undergo annual leak detection testing.
- Releases/Spills - HQ USAF/ILEV must be notified of releases from storage tanks. When there is a suspected leak of a UST, the installation is required to perform a tightness test of the system.
- Alarm Systems and Shutoff Valves - Base Fuels Management Office (BFMO) fuel tanks with the capacity to receive fuel by pipeline and BFMO fuel tanks with the capacity to receive fuel by tank truck installed with off-loading pumps and headers are required to have high-level alarms and automotive high-level shutoff valves.
- ASTs - There must be an inventory of all ASTs. All ASTs are required to be provided with diking or a drainage system to prevent accidental discharge from endangering adjoining property. These dikes are to be inspected daily by the BFMO.

- Organizational Fuel Tanks - Organizational fuel tanks are to be marked NO SMOKING. If they are over 660 gal they are required to be diked. Issue tanks are required to be equipped with a calibrated dispensing meter. All organizational fuels tanks are to be calibrated annually, after repairs, and when accuracy is in doubt. These tanks are to undergo gauging daily.
- USTs - A separate file is required to be maintained on each UST system. The installation is required to have the UST inventory available on the Work Information Management System - Environmental Subsystem (WIMS-ES) and the BFMO is required to keep inventory control records. Fuels personnel are required to be trained on leak detection equipment.

E. Key Compliance Personnel

- Spill Response Team (SRT). The SRT is tasked to respond to spills when requested by an On-Scene Commander (OSC) and to perform spill containment, recovery, cleanup, disposal, and restoration activities as directed by the OSC. The SRT is a multidisciplinary team often including the following persons: BCE, Base Environmental Manager, Bioenvironmental Engineer (BEE), Base Disaster Preparedness Officer (BDPO), Fire Chief, Security Police Chief, Public Affairs Officer (PAO), Base Fuels Flight Commander, Safety Chief, and Staff Judge Advocate (JA).
- Base Fire Department. The fire department provides support in emergency response, spill events, exercises, and fire protection activities. In addition, the department will be responsible for making periodic fire safety inspections of flammable or combustible storage and handling areas, hazardous waste storage areas, and accumulation points on the installation.
- Safety Manager. This individual is responsible for conducting workplace safety evaluations and inspections of the handling and storage of hazardous materials and waste. They will provide the appropriate manager with a report of their findings and recommended corrective actions. They are also responsible for ensuring the prompt and accurate investigation of any hazardous material mishaps that result in injury or property damage.
- The BFMO. The BFMO is responsible for the safe and efficient receipt, storage, handling, issuing, and accounting of all petroleum products to include all general operations and inspections.
- The BCE. The BCE is responsible for the maintenance of all installed petroleum storage and dispensing systems. This responsibility often is discharged by the Liquid Fuels Maintenance (LFM) shop. The BCE also is responsible for the calibration of permanently installed meters.
- Base Environmental Manager (EM). The EM monitors all petroleum, oil, and lubricant (POL) activities that may affect the environment and usually is responsible for the coordination of the Environmental Protection Committee (EPC) review and updates of the Spill Prevention and Response (SPR) Plan. The EM also often coordinates the reportable spills notification of appropriate Federal and state agencies on behalf of the Base On-Scene Commander (OSC). Generally the EM comes under the BCE.
- The BEE. The BEE takes samples to determine the chemical nature, pollutant concentration, and extent of each reportable quantity spill as required for response actions and documentation.
- The BDPO. The BDPO is responsible for emergency planning and training of installation disaster response forces. When appointed as the *Emergency Planning and Community Right-to-Know Act* (EPCRA) coordinator, the BDPO will exchange emergency response plans with the Local Environmental Protection Committee (LEPC) and participate in LEPC meetings.
- Fuels Environmental Coordinator - This is a position assigned by the BFMO to ensure POL operations are accomplished in accordance with federal, state, local and environmental laws. The Fuels environmental coordinator consults with the installation EM, BCE, BEE, and EPC.

F. Key Air Force/DOD Compliance Definitions

- *Bulk Petroleum Products* - liquid petroleum products transported by various means and stored in tanks or containers having an individual fill capacity greater than 250 L [approx. 66 gal] (AFI 203- 21, Attachment 1).
- *Change in Service* - continued use of a UST system to store an unregulated substance (AFI 32-7044, Attachment 1).
- *Free Product* - a regulated substance that exists as a nonaqueous-phase liquid (a liquid that does not dissolve in water) (AFI 32-7044, Attachment 1).
- *Issue Tank* - this tank is not permanently connected to any equipment or facility and may be used to fuel vehicles such as mobile trailers, ground support or heavy equipment, or portable containers (AFI 23-204, para 2).
- *Organizational Fuel Tank* - these are tanks which are fixed (permanently installed) or portable and must meet established engineering criteria. Organizational tanks do not include fuel tanks integral to vehicles or equipment, any type of hand-carried safety can, 55-gal drums, or missile propellant conditioning systems. There are three categories of organizational fuel tanks: support tanks, issue tanks, and portable tanks (AFI 23-204, para 2).
- *Overfill Release* - a release occurring when someone attempts to fill a tank beyond its capacity, resulting in discharging the regulated substance to the environment (AFI 32-7044, Attachment 1).
- *Portable Tank* - a tank which may be used as either an issue or a support tank. Any mobile or portable tank (for example an A1B or vehicle mounted POD tank, or a Mobile Engine Test Stand Tank, etc.) used for mobility maintenance, research, and development or similar purpose, is a portable tank (AFI 23-204, para 2).
- *Support Tank* - a tank connected by fixed piping to a consuming facility or installed piece of equipment. Examples include day tanks for power plants and boilers, space heater tanks, aviation test cell tanks, and tanks for electrical generators (AFI 23-204, para 2).

G. Additional Records To Review

- Records of all spills, leaks, and associated site assessment/cleanup activities (for 3 yr)
- Official correspondence with state implementing agency

H. Additional Physical Features To Inspect

- Refueling facilities, including:
- Above and belowground storage tanks and dikes
- Venting
- Fill pipe
- Gauges

I. People To Interview

- Fuels Environmental Coordinator
- Environmental Manager
- Base Civil Engineer
- Base Fuels Management Officer
- Liquid Fuels Maintenance
- Base Bioenvironmental Engineer
- Base Fire Department
- BCE Contract Management Officer
- Technical and Design Engineer
- Base Contracting Officer
- Interior Electric Shop/Base Cathodic Protection Engineer
- Contract Programmer
- Base Disaster Preparedness Officer

J. Guidance for Air Force Supplement Storage Tank Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	ST.1.1 and ST.1.2
Missing Checklist Items	ST.2.1
All Storage Tanks	ST.4.1 through ST.4.12
Aboveground Storage Tanks	ST.5.1 through ST.5.8
USTs	ST.30.1 and ST.30.2
Release Detection for USTs General	ST.60.1
UST Releases	ST.80.1 and ST.80.2
UST Documentation	ST.90.1 through ST.90.4

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<p>ST.1</p> <p>ALL INSTALLATIONS</p> <p>ST.1.1. Copies of all relevant Federal, state, and local regulations on storage tank management should be maintained at the installation (MP).</p> <p>ST.1.2. As a good management practice the BCE and BFMO should have a Memorandum of Agreement (MOA) pertaining to draining of floating roof tanks. This MOA should be signed by the BCE and BFMO and coordinated with the Base EM and the BEE (MP).</p>	<p>Verify that a file of Federal and state petroleum, oil, and lubricant (POL), Spill Prevention, Control, and Countermeasures (SPCC) plan (Spill Prevention), and Oil and Hazardous Substances Pollution Contingency (OHSPC) Regulations are maintained and kept current at the installation:</p> <ul style="list-style-type: none"> - EO 12088, <i>Federal Compliance With Pollution Standards</i>. - 40 CFR 112, <i>Oil Pollution Prevention</i>. - 40 CFR 279, <i>Standards for the Management of Used Oil</i>. - 40 CFR 280, <i>Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (USTs)</i>. - AFI 23-201, <i>Fuels Management</i>. - AFI 23-204, <i>Organizational Fuel Tanks</i>. - AFI 32-7044, <i>Storage Tank Compliance</i>. - AFM 85-5, <i>Maintenance of Cathodic Protection Systems</i>. - AFM 85-16, <i>Maintenance of Petroleum Systems</i>. - Technical Orders 35-1-3, 36-1-3, 37-1-1, 42B-1-1, 42B-1-23, and 00-25-172. - <i>Air Force Underground Storage Tank Management Strategy</i>. - applicable state and local regulations. <p>Verify that the Base Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the EPC informed as needed.</p> <p>(NOTE: This MP is based on guidelines found in AFM 85-16, Attachment 5.)</p> <p>Verify that an MOA has been prepared.</p> <p>Verify that the MOA was signed or coordinated through the Base EM and the BEE.</p> <p>Verify that copies are on file at the BFMO, LFM. BCE Service Call Desk, Base EM, and BEE.</p>

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ST.2 MISSING CHECKLIST ITEMS ST.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this checklist item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but no addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
ST.4 ALL STORAGE TANKS ST.4.1. The Air Force UST Management Strategy strongly recommends annual leak testing of air field hydrant fuel systems even though they are currently deferred from USEPA regulations (AFI 32-7044, para 2.12). ST.4.2. The BFMO is required to maintain a list of all organizational fuel tanks in addition to developing and maintaining a training program (AFI 23-204, para 3.6.2, 13.1, and 13.3). ST.4.3. Organizational tank custodians should be trained for Hazardous Waste Operations Emergency Response Level 1 (MP). ST.4.4. Organizational tank custodians are required to be	<p>(NOTE: This section contains checklist items which do not easily fit under the headings used in TEAM Guide. In this case it addresses hydrant fueling systems and organizational fuel tanks.)</p> <p>Determine if installation has an airfield hydrant fuel system, and if so, when it was last leak tested.</p> <p>(NOTE: Not required where approved leak detection system (i.e., tracer) is installed.)</p> <p>(NOTE: Some states do not defer airfield hydrant fueling systems.)</p> <p>Verify that all new hydrant systems have automatic release detection systems and line leak detectors.</p> <p>Verify that the BFMO maintains a list of all supported organizational fuel tanks with the following identifiers:</p> <ul style="list-style-type: none"> - organization - tank location and type (for example, aboveground support or underground issue etc.) - type of product stored - tank capacity. <p>Verify that the BFMO has developed and maintains a program to train tank custodians and provide refresher training.</p> <p>(NOTE: Training is provided upon the request of the using organization commander.)</p> <p>Verify that the BFMO keeps the custodian training documents including an audit trail of trained custodians.</p> <p>Verify that the BFMO also briefs fuel delivery vehicle escorts on their duties.</p> <p>Verify that tank custodians are trained for Hazardous Waste Operations Emergency Response Level I.</p> <p>(NOTE: This is based on a recommendation in AFI 23-204, para 13.2.3.)</p> <p>Verify that tank custodians are trained in the following areas:</p>

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<p>trained on specific issues (AFI 23-204, para 13.2).</p> <p>ST.4.5. Tank custodians for USTs are required to check weekly fuel reports to determine leakage (AFI 23-204, para 12.1.2).</p> <p>ST.4.6. Organizations with organizational fuel tanks are required to perform specific activities (AFI 23-204, para 8.2).</p> <p>ST.4.7. All organizational fuel tanks are required to meet specific marking standards (AFI 23-204, para 6).</p> <p>ST.4.8. All organizational fuel tanks are required to meet specific security standards (AFI 23-204, para 5, 7.1.1,</p>	<ul style="list-style-type: none"> - gauging procedures for both fuel and water - daily facility inspection and maintenance requirements including: <ul style="list-style-type: none"> - product accountability and proper completion of inventory documentation (AF Form 300 or similar computer document) - safety precautions - how to receive shipments - responsibilities under the Hazardous Materials Emergency Planning and Response Requirements Plan. <p>Verify that organizational tank custodians for USTs check weekly fuel reports to determine leakage.</p> <p>(NOTE: BCE is the owning organization for all heating and power production support tanks.)</p> <p>Verify that the organization has provided the BFMO with a list of all support tanks authorized to receive fuel including:</p> <ul style="list-style-type: none"> - facility number - name and telephone of tank custodian and alternate - tank size in U.S. gallons - the grade of fuel. <p>Verify that changes are forwarded to BFMO as they occur.</p> <p>Verify that organizational fuel tanks are marked to indicate NO SMOKING and the type of fuel stored as follows:</p> <ul style="list-style-type: none"> - highly visible colors are used and large lettering - markings are visible from a distance of 50 ft - markings are positions so as to be visible from each approach. <p>(NOTE: The international NO SMOKING sign may be used when marking diesel, mogas, and other products.)</p> <p>Verify that, for unattended tanks, the following are secured:</p> <ul style="list-style-type: none"> - pump-dispensing nozzles and electrical power source for all issue tanks - gauge hatches and other access points on all storage tanks - bulk fuel off-loading systems

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<p>and 7.1.2).</p> <p>ST.4.9. All organizational fuel tanks are required to meet specific requirements for meters (AFI 23-204, para 7.1.1, and 7.1.2).</p> <p>ST.4.10. Single or manifolded tanks are required to have impervious secondary diking (AFI 23-204, para 12.1.4).</p> <p>ST.4.11. Specific operating procedures are required to be used with organizational fuel tanks (AFI 23-204, para 7.2, 7.3 and 9).</p>	<p>– low point drains.</p> <p>Verify that, if padlocks are used, the hasp, chain, handle, or any other attachment provides protective strength equivalent to more complicated devices.</p> <p>Verify that tank custodians have established appropriate key control.</p> <p>(NOTE: Combination and magnetic locks may be used.)</p> <p>Verify that all issue tanks are equipped with a calibrated dispensing meters.</p> <p>Verify that all organizational fuel tank meters are calibrated annually, after repairs, and when accuracy is in doubt.</p> <p>Verify that all organizational tanks, regardless of size, are equipped with certified calibration charts, unless waived by the Major Command (MAJCOM) civil engineer.</p> <p>(NOTE: Computer generated calibration charts may be used.)</p> <p>Verify that single or manifolded tanks have impervious secondary diking.</p> <p>Verify that personnel working with calibrated tanks do the following:</p> <ul style="list-style-type: none"> – record daily entries on AF Form 500 – take water readings with water finding paste. <p>(NOTE: Tank custodians may use an automated program instead of AF Form 500.)</p> <p>Verify that personnel working with uncalibrated tanks:</p> <ul style="list-style-type: none"> – fill tanks to the safe fill level each time fuel is received – establish a method for determining quantity for each tank and keep a record of it on file – perform fuel inventory. <p>Verify that calibrated tanks are gauged daily to determine the actual physical inventory.</p>

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ST.4.12. Fuel cannot be issued from support tanks to vehicles or other equipment (AFI 23-204, para 2).	<p>Verify that all tanks are gauged prior to receiving the product to determine tank ullage.</p> <p>Verify that fuel is not issued from support tanks to vehicles or other equipment.</p>

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<p>ST.5</p> <p>ABOVEGROUND STORAGE TANKS</p> <p>ST.5.1. Installations are required to notify HQ USAF/ILEV of releases from storage tanks (AFI 32-7044, para 2.8.3.2).</p> <p>ST.5.2. BFMO controlled ASTs are required to be equipped with high-level alarms and automatic high-level shut-off valves (AFI 23-201, para Attachment 10, para 10.1) [December 1996].</p> <p>ST.5.3. The installation is required to have an inventory list of all ASTs (AFI 32-7044, para 3.2).</p> <p>ST.5.4. ASTs are required to be provided with drainage or diking to prevent any accidental discharge from endangering adjoining property or reaching waterways (AFI 32-7044, para 3.3.3).</p> <p>ST.5.5. Secondary containment is required to be impermeable to petroleum products (AFI 23-201, Attachment 10, para A10.1) [December 1996].</p> <p>ST.5.6. Deleted. [March</p>	<p>Verify that the installation has notified HQ USAF/ILEV of all releases.</p> <p>Verify that all BFMO controlled tanks have high-level alarms and/or automatic high-level shut-off valves.</p> <p>Verify that BFMO has established safe fill levels below the high-level alarm level.</p> <p>Verify that the installation has an inventory of all ASTs and their characteristics.</p> <p>Verify that ASTs on the installation are provided with drainage or diking to prevent any accidental discharge from endangering adjoining property or reaching waterways.</p> <p>Verify that all ASTs have secondary containment that is impermeable to petroleum products.</p> <p>This checklist item has been deleted.</p>

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<p>1996].</p> <p>ST.5.7. Drainage water from diked areas around bulk ASTs that is determined to contain petroleum products in harmful quantities is required to be treated before discharge (AFI 23-201, Attachment 10, para A10.1) [December 1996].</p> <p>ST.5.8. Fuels personnel are required to be present for all inoculations of leak detection chemicals in BFMO controlled bulk ASTs (AFI 23-201, Attachment 10, para A10.3) [December 1996].</p>	<p>Verify that drainage water which contains residual petroleum products or hazardous chemicals is not discharged.</p> <p>Verify that fuels personnel are present for all inoculations of leak detection chemicals in BFMO controlled bulk ASTs.</p>

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<p>ST.30</p> <p>USTs</p> <p>ST.30.1. Fuels personnel are required to be present for all inoculations of leak detection chemicals in BFMO controlled bulk USTs (AFI 23-201, Attachment 10, para A10.3) [December 1996].</p> <p>ST.30.2. New USTs used to store heating oil for consumptive use on the premise should meet the requirements outlined in 40 CFR 280 (MP).</p>	<p>Verify that fuels personnel are present for all inoculations of leak detection chemicals in BFMO controlled bulk USTs.</p> <p>Verify that new heating oil USTs meet release detection requirements, spill and over fill protection requirements, corrosion control requirements, and release reporting requirements applicable to tanks that meet the definition of UST.</p> <p>Verify that EM and BCE personnel coordinate during planning for new tanks or tank repair.</p> <p>(NOTE: Under 40 CFR 280.12, USTs storing heating oil for consumptive use on the premises are exempted from the regulatory definition of UST.)</p>

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RELEASE DETECTION FOR USTs ST.60 General ST.60.1. BFMO controlled USTs are required to be equipped with high- level alarms and automatic high-level shut-off valves (AFI 23-201, para Attachment 10, para 10.1) [December 1996].	<p>Verify that all BFMO controlled tanks have high-level alarms and/or automatic high- level shut-off valves.</p> <p>Verify that BFMO has established safe fill levels below the high-level alarm level.</p>

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<p>ST.80</p> <p>UST RELEASES</p> <p>ST.80.1. Installations with a suspected release from a UST are required to perform specific activities (AFI 32-7044, para 2.8.1.1 and 2.8.1.2).</p> <p>ST.80.2. Releases of free product outside a UST are required to be cleaned up as soon as possible (AFI 32-7044, para 2.8.2.1).</p>	<p>Verify that, if the installation suspects a leaking UST, immediate action is taken to investigate and confirm the release.</p> <p>Verify that, if there is a suspected release because of environmental contamination but a leak is not detected, a site check is performed by sampling and measuring for contamination at the UST site.</p> <p>Verify that releases of free product outside a UST are cleaned up as soon as possible.</p>

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REGULATORY REQUIREMENTS	REVIEWER CHECKS: September 1999
<p>ST.90</p> <p>UST DOCUMENTATION</p> <p>ST.90.1. Installations are required to have a UST inventory readily available at the environmental flight or environmental management office (AFI 32-7044, para 2.10.1).</p> <p>ST.90.2. The BFMO is required to maintain inventory control records and keep them available for inspection (AFI 32-7044, para 2.10.2).</p> <p>ST.90.3. Installations are required to use WIMS-ES to develop and maintain a comprehensive list of tanks and piping locations and characteristics to accurately track and report UST compliance status (AFI 32-7044, para 2.2).</p> <p>ST.90.4. The Air Force Management Strategy directs the installation to notify the regulators in writing if they are going to miss a compliance deadline. If a compliance deadline is not met, the installation is required to work out a compliance agreement with the regulator (30 May 1990, <i>UST Management Strategy Letter</i>).</p>	<p>Verify that the installation is maintaining an inventory of USTs.</p> <p>Verify that the BFMO is maintaining the inventory control records.</p> <p>Verify that an accurate inventory is being kept and that WIMS-ES accurately reflects compliance status.</p> <p>Determine if the installation missed a compliance deadline, and if so, review the letter of notification to the regulator and the compliance agreement.</p>

SECTION 11

TOXIC SUBSTANCES MANAGEMENT

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A. U.S. Air Force Instructions (AFIs) and Policies

PCBs

- HQ USAF/CEV Letter, *Removal of Polychlorinated Biphenyl (PCB) Equipment from Air Force Installations*. The letter, dated 29 April 1986, required all major commands to draft management plans for removing all PCB equipment from AF installations by FY92.
- HQ USAF/CEV Letter, *Removal of Polychlorinated Biphenyls (PCBs) Items from Air Force Installations*. The letter, dated 5 April 1988, required an update on major command plans to remove all PCB items by FY92 including:
 1. all PCB items (greater than 500 ppm)
 2. all PCB contaminated items (50 to 499 ppm)
 3. reclassifications (retrofilling, filtering, and treatment processes)
 4. funding requirements and program approach, A-106 report inputs.
- HQ USAF/CE/SGP Letter, *Polychlorinated Biphenyls (PCBs) Spill Clean-up Policy*. The letter, dated 24 July 1987, requires cleanup of PCBs to different levels, depending on release location, potential for exposure after cleanup, concentration of PCBs released, and the nature and size of population at risk.
- HQ USAF/CE Letter, *New Polychlorinated Biphenyls (PCBs) Notification, Recordkeeping, and Manifest Requirement*. The letter, dated 1 March 1990 and 19 July 1990, summarizes new requirements of 40 CFR 761.205(b)-(c) and 207-215.
- HQ USAF/CEV Letter, *Continuation of the Air Force Polychlorinated Biphenyl (PCB) Free Policy*. This letter, dated 24 May 1993, re-emphasizes the Air Force goal to be PCB free. It recommends using ECAMP to ensure full compliance and requires the Major Commands (MAJCOMs) to provide current PCB status.
- HQ USAF/CE Letter, *Air Force Policy on Measuring Air Force PCB-Free Status - ACTION MEMORANDUM*. This letter, dated 21 March 1994, revises how Air Force PCB-free status is measured. Instead of measuring the number of PCB items rendered PCB free, it will be the number of installations PCB-free based on data in the WIMS-ES PCB module.
- AFI 32-7002, *Environmental Information Management System*. This instruction, dated 31 May 1994, provides guidance and procedures to standardize the use of the Work Information Management System - Environmental Subsystems (WIMS-ES).

Asbestos

- AFI 32-1052, *Facility Asbestos Management*. This instruction, dated 22 March 1994, established requirements and assigns responsibilities to incorporate facility asbestos management principles and practices into all Air Force programs.
- AF Policy Letter, *Asbestos, Lead Paint and Radon Policies at BRAC Properties*. This letter, dated 10 November 1994, applies to property being disposed of through the Base Realignment and Closure (BRAC) process and supersedes all previous policy on this matter.

- AF Policy Letter, *Asbestos Policy for Closure Bases*, 25 March 1994, establishes the policy to be used at all closure bases that are identified in the Base Realignment and Closure (BRAC) process.
- Under Secretary of Defense Letter, *Asbestos, Lead Paint, and Radon Policies at BRAC Properties*. This letter, dated 31 October 1994, outlines DOD policies on asbestos, lead paint, and radon at BRAC properties.

Radon

- Radon Assessment and Mitigation Program (RAMP). RAMP was initiated by the Assistant Vice Chief of Staff of the Air Force (USAF/CV) by policy letter on 23 October 1987. This letter transmitted the RAMP Implementation Plan to Air Force activities for implementation.
- AF Policy Letter, *Asbestos, Lead Paint and Radon Policies at BRAC Properties*. This letter, dated 10 November 1994, applies to property being disposed of through the BRAC process and supersedes all previous policy on this matter.
- Under Secretary of Defense Letter, *Asbestos, Lead Paint, and Radon Policies at BRAC Properties*. This letter, dated 31 October 1994, outlined DOD policies on asbestos, lead paint, and radon at BRAC properties.

Lead-Based Paint (LBP)

- HQ USAF Policy Letter, *Air Force Policy and Guidance on Lead-Based Paint in Facilities*. This policy letter, dated 24 May 1993, specified actions required to protect facility occupants and workers and the environment from hazardous exposure to lead in LBPs. Appendix 11-1 summarizes the likelihood of LBP being present and the regulations/guidelines that normally must be followed.
- Air Force Base Conversion Agency (AFBCA) Policy Letter, *Instructions for Facilities at Closure Bases*. This letter, dated 4 November 1993 and changed on 10 August 1994, details the responsibilities and actions concerning LBP at closure installations.
- AF Policy Letter, *Asbestos, Lead Paint and Radon Policies at BRAC Properties*. This letter, dated 10 November 1994, applies to property being disposed of through the BRAC process and supersedes all previous policy on this matter.
- Under Secretary of Defense Letter, *Asbestos, Lead Paint, and Radon Policies at BRAC Properties*. This letter, dated 31 October 1994, outlined DOD policies on asbestos, lead paint, and radon at BRAC properties.
- HQ USAF/ILEV Policy Letter, *Policy and Guidance on LBP Final Disclosure Rule*. This letter, dated 19 August 1996, summarizes the Federal LBP Final Disclosure Rule and stipulates a schedule for notification within the Air Force [Added December 1997].

B. Department of Defense (DOD) Directives and Instructions

- None that have not been implemented/superseded by AFIs.

C. Using the TEAM Guide for ECAMP

- No additional instructions.

D. Key Air Force/DOD Compliance Requirements

- Asbestos Identification - Installation buildings with the potential to be contaminated with asbestos should be tested and surveyed for asbestos and friable materials.
- Asbestos Management Plan - Installations with maintenance responsibilities are required to have a written Asbestos Operation and Management Plan.
- Asbestos at Closure Installations - Asbestos at closure installations is required to be treated differently than at a nonclosure installation. A survey has to be done within 6 mo prior to closure. Remediation must be done by the AFBCA unless the transferee is willing to conduct the remediation.
- Radon

MITIGATION TIME FRAME

Radon Level (pCi/L)	Mitigate
Greater than 200 ¹	1 mo or move the occupants
200<20 ¹	6 mo
20<8 ²	1-4 yr ³
8<4 ²	5 yr
4 or less ¹	No action required

¹Determine by 90-day screen or a 1-yr measurement in the case of Priority 2 and 3 structures.

²Annual average determined by 1-yr measurement. Screening measurements in this range will not be used as the basis for initiating mitigation actions.

³Depending on the level of the measurement.

- LBP - Installations are required to develop and implement a plan for identifying, evaluating, and managing LBP hazards. Personnel working with LBP are required to be trained. Paint used on the installation will not contain more than 0.06 percent lead by weight.
- LBP at Closure Installations - Closure installations are required to have a LBP survey of high priority facilities. How the survey is conducted is based on the age of the facilities being surveyed.
- LBP Disclosure Notification - Air Force housing offices were to begin disclosure activities by 6 September 1996 for all personnel being newly assigned to pre-1978 Military Family Housing (MFH) and by 6 February 1997 for personnel already assigned to pre-1978 MFH units [Added December 1997].

E. Key Compliance Personnel

PCBs

- Base Civil Engineering (BCE). The BCE, through the Exterior Electrical Shop and the Base Environmental Coordinator, is responsible for identifying, inspecting, marking (labeling), and properly servicing PCB electrical equipment (transformers and capacitors).
- Base Environmental Manager. The Base Environmental Manager is responsible for ensuring that out-of-service items are stored in a technically adequate PCB storage facility. Normally, such facilities are located at a Defense Reutilization and Marketing Organization (DRMO) and the DRMO is responsible for storage, disposal, transportation, and contracting for disposal.

- Bioenvironmental Engineer (BEE). The BEE is responsible for arranging for chemical analytical support in screening electrical equipment or PCBs and for cleanup verification.

Asbestos

- Asbestos Operations Officer. Asbestos Operations Officer prepares and implements the Asbestos Operating Plan.
- Asbestos Program Officer. Asbestos Program Officer prepares the Asbestos Management Plan that contains documentation on all asbestos management efforts and the mechanism for oversight of the Asbestos Management Program.
- The BCE. The BCE appoints an Asbestos Program Officer to prepare the Asbestos Management Plan and an Asbestos Operations Officer to prepare the Asbestos Operating Plan. He also ensures a sufficient number of in-house technicians and supervisors are trained and equipped to remove, repair, and control ACM.
- Base Environmental Manager. The Base Environmental Manager is responsible for ensuring proper disposal of friable asbestos. DRMO is responsible for contracting for disposal of friable asbestos.
- The BEE. The BEE takes air samples, evaluates friable materials for the presence of asbestos, and assigns Risk Assessment Codes (RAC) so the situation can be treated as a hazard.

Radon

- The BCE. The BCE is responsible for reviewing radon assessments and implementation of radon mitigation activities in accordance with Air Force RAMP.
- The BEE. The BEE is responsible for radon sampling and assessments at installation offices, housing, daycare facilities, etc. The BEE provides these sample results to the BCE. The BEE is also responsible for post mitigation monitoring to determine the adequacy of mitigation measures.

LBP

- The BCE. The BCE will participate in developing and implementing the management plan for identifying, evaluating, managing, and abating LBP. Additionally, they train personnel and maintain records of activities.
- Chief, Aerospace Medicine. The Chief, Aerospace Medicine will ensure a coordinated epidemiological analysis of facility lead sampling results and positive pediatric lead analysis is accomplished.
- The BEE. The BEE will conduct testing and sampling of paint to determine the lead content. They will participate in inspections and training activities as well.

F. Key Air Force/DOD Compliance Definitions

- None

G. Additional Records To Review

- Asbestos management plan and operating plan
- Records of asbestos training program
- List of buildings insulated with asbestos or housing ACM

- Radon test results

H. Additional Physical Features To Inspect

- None

I. People To Interview

- Base Civil Engineering (Environmental Planning)
- Base Bioenvironmental Engineer (BEE)
- Base Civil Engineering (Exterior Electric Shop)
- Defense Reutilization and Marketing Office (DRMO)
- On-Scene Coordinator or Remedial Project Manager (OSC/RPM)
- Engineering Programmer (DEP)
- Base Environmental Manager
- Judge Advocate

J. Guidance for Air Force Supplement Toxic Substances Management Checklist Users

	REFER TO CHECKLIST ITEMS:
PCB Management	
All Installations	T1.1.1 and T1.1.2
Missing Checklist Items	T1.2.1
Asbestos Management	
All Installations	T2.1.1 through T2.1.9
Missing Checklist Items	T2.2.1
Asbestos at Closure Installations	T2.4.1 through T2.4.3
(NOTE: All checklist items from T2.4 have been moved to T2.1.)	
Radon Management	
All Installations	T3.1.1 through T3.1.3
Missing Checklist Items	T3.2.1
Lead-Based Paint (LBP)	
All Installation	T4.1.1 through T4.1.12
Missing Checklist Items	T4.2.1
Notification Requirements	T4.10.1 and T4.10.2
Training Requirements	T4.15.1
Work Practice Standards	T4.20.1 and T4.20.4
(NOTE: The entire LBP section has been reorganized to facilitate consistency between TEAM manuals.	

Appendix 11-1, *Summary of Likelihood of LBP Being Present and Regulations/Guidelines Which Normally Must Be Followed.*

Appendix 11-2, *LBP Sampling Strategies for Closure Bases.*

Appendix 11-3, *Testing in Single Family Housing.*

Appendix 11-4, *LBP Summary Chart for Housing to Be Conveyed.*

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>T1.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>T1.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
T2.1.3. Installations are required to have a written Asbestos Operating Plan (AFI 32-1052, para 6).	Verify that the Asbestos Operating Plan: <ul style="list-style-type: none"> - assigns responsibilities - establishes inspection and repair teams - gives repair procedures and personnel protection instructions - includes references to and explanations of applicable USEPA and OSHA regulations, Air Force Policy Directive (AFPD) 32-70, and AFI 91-301 - addresses the following: <ul style="list-style-type: none"> - the organizational structure for carrying out asbestos related work - personnel training programs - equipment and supply requirements - identification of worker manuals or other written procedures - yearly budget estimates - procedures for interim control measures and extraordinary precautions - procedures for asbestos certification and asbestos disposition statements on programming documents - requirements for a special response team and in-house inspection capability - contractor requirements to perform analytical work and asbestos abatement.
T2.1.4. Installations must repair or remove damaged ACM and monitor friable ACM (AFI 32- 1052, para 2.1 and 2.3).	Verify that damaged ACM is removed or repaired. Verify that friable asbestos is routinely inspected by reviewing inspection logs. (NOTE: Damaged ACM is presumed to be hazardous because of its potential to release airborne asbestos fibers.)
T2.1.5. Installations must include complete removal of ACM in planning operations and maintenance and military construction program facility projects (AFI 32-1052, para 2.2.3).	Verify that the installation includes complete removal of ACM in planning operations and maintenance and military construction program facility projects when safety and budgetary considerations permit.
T2.1.6. Installations must remove existing ACM at opportune times during minor construction or repairs (AFI 32- 1052, para 2.2.4).	Verify that the installation removes existing ACM at opportune times during minor construction or repairs. (NOTE: This can be verified by reviewing written documentation as specified in the installation management plan.)

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>T2.1.7. A survey of facilities for ACM is required to be accomplished or updated within 6 mo of the initial transfer (AF Policy Letter, <i>Asbestos Policy for Closure Bases</i>, 25 March 1994, Section 3(b)) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number T2.4.1. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that a survey of facilities for ACM is accomplished or updated within 6 mo of the initial transfer.</p> <p>(NOTE: This requirement applies whether the initial transfer occurs by lease, sale, or other disposal method.)</p> <p>Verify that, at a minimum, the survey identifies the extent of asbestos contained in facilities and the exposure hazards.</p> <p>Verify that surveys are accomplished under the supervision of an accredited asbestos professional.</p> <p>Verify that the survey includes, at a minimum, the following:</p> <ul style="list-style-type: none"> – a review of facility records – a visual inspection – an intrusive inspection, as directed by an accredited asbestos professional – ambient air sampling, if directed by an accredited asbestos professional. <p>(NOTE: Ambient air sampling is carried out in order to determine whether any appropriate remedial actions are needed prior to the property being leased or transferred, or to protect facility occupants.)</p>
<p>T2.1.8. Prior to property disposal all available information on the existence, extent, and condition of ACM is required to be incorporated into the EBS report or other appropriate document to be provided to the transferee (Under Secretary of Defense Letter, <i>Asbestos, Lead Paint, and Radon Policies at BRAC Proper ties</i>, 31 October 1994) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number T2.4.2. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the document to be transferred contains the following information:</p> <ul style="list-style-type: none"> – reasonably available information on the type, location, and condition of asbestos in any building or improvement on the property – any results of testing for asbestos – a description of any asbestos control measures taken for the property – any available information on costs or time necessary to remove all or any portion of the remaining ACM (special studies or tests to obtain this material are not required) – results of a site-specific update of the asbestos inventory performed to revalidate the condition of ACM.
<p>T2.1.9. Remediation of ACM in facilities at closure installations is required to be</p>	<p>(NOTE: This was originally checklist item number T2.4.3. It was moved to facilitate consistency between TEAM manuals.)</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>carried out in accordance with applicable laws, regulations, and standards (AF Policy Letter, <i>Asbestos Policy for Closure Bases</i>, 25 March 1994, Section 3(c) and Under Secretary of Defense Letter, <i>Asbestos, Lead Paint, and Radon Policies at BRAC Properties</i>, 31 October 1994) [Moved April 1999].</p>	<p>Verify that remediation of ACM in facilities at closure installations is carried out in accordance with applicable laws, regulations, and standards.</p> <p>(NOTE: According to the DOD Policy letter ACM will be remediated prior to property disposal only if it is of a type and condition that is not in compliance with applicable laws, regulations, and standards, or it poses a threat to human health at the time of transfer of the property.)</p> <p>(NOTE: According to the AF policy letter remediation of ACM may be required if, in the judgment of an accredited asbestos professional, at least one of the following criteria apply:</p> <ul style="list-style-type: none"> - the ACM is of a type, condition, and in a location such that, through normal and expected use of the facility, it will be damaged to the extent that it will produce an asbestos fiber hazard to facility occupants - the type and condition of the ACM is such that it is not in compliance with the appropriate statutes or regulations.) <p>(NOTE: Remediation of ACM will not be accomplished by the AFBCA if the transferee is willing to conduct remediation in accordance with applicable standards prior to beneficial occupancy as part of the transfer agreement.)</p> <p>(NOTE: Remediation is not required if the building is scheduled for demolition by the transferee, the transfer document prohibits occupation of the buildings prior to the demolition, and the transferee assumes responsibility for the management of any ACM in accordance with the application laws.)</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
T2.2 MISSING CHECKLIST ITEMS T2.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

<p align="center">COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement</p>	
<p align="center">REGULATORY REQUIREMENTS:</p>	<p align="center">REVIEWER CHECKS: September 1999</p>
<p>ASBESTOS MANAGEMENT</p> <p>T2.4 Asbestos at Closure Installations</p> <p>T2.4.1. Checklist item moved [Moved April 1999].</p> <p>T2.4.2. Checklist item moved [Moved April 1999].</p> <p>T2.4.3. Checklist item moved [Moved April 1999].</p>	<p>(NOTE: This was moved to checklist item number T2.1.7. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number T2.1.8. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number T2.1.9. It was moved to facilitate consistency between TEAM manuals.)</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
radon assessment data pertaining to BRAC property being transferred is required to be included in property transfer documents (Under Secretary of Defense Letter, <i>Asbestos, Lead Paint, and Radon Policies at BRAC Properties</i> , 31 October 1994).	property being transferred is included in property transfer documents. (NOTE: DOD Policy is not to perform radon assessment and mitigation prior to transfer of BRAC property unless otherwise required by applicable law.)

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
T3.2 MISSING CHECKLIST ITEMS T.3.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>LEAD-BASED PAINT (LBP)</p> <p>T4.1 All Installations</p> <p>T4.1.1. Copies of all relevant Federal, state, local regulations, DOD and U.S. Air Force directive, and guidance documents on LBP should be maintained at the installation (MP) [Revised December 1997].</p> <p>T4.1.2. Installations are required to develop and implement a plan for identifying, evaluating, managing, and abating LBP hazards (HQ USAF/ CC Policy letter 24 May 1993, para 6).</p>	<p>Determine whether copies of the following documents and publications are maintained and kept current at the installation:</p> <ul style="list-style-type: none"> - HQ USAF/CC Policy Letter, <i>Air Force Policy and Guidance on Lead-Based Paint in Facilities</i>, 24 May 1993. - AFBCA Policy Letter, <i>Instructions for Facilities at Closure Bases</i>, 4 November 1993. - Under Secretary of Defense Letter, <i>Asbestos, Lead Paint, and Radon Policies at BRAC Properties</i>, 31 October 1994. - HQ USAF/CEV Policy Letter, <i>Policy and Guidance on LBP Final Disclosure Rule</i>, 19 August 1996. <p>Verify that the installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing or proposed activities and keep the EPC informed as needed.</p> <p>Verify that the installation has a management plan which includes a strategy for:</p> <ul style="list-style-type: none"> - identifying, evaluating, controlling, and eliminating existing LBP hazards and preventing new hazards from developing - protecting facility occupants, especially children, and workers from LBP hazards - ensure compliance with all applicable environmental protection requirements and all laws and regulations pertaining to LBP activities. <p>Verify that the plan also:</p> <ul style="list-style-type: none"> - is an integral part of their overall plan for inspecting, constructing, upgrading, repairing, maintaining, and demolishing the facility inventory - is based on local conditions and an evaluation of the health risk from LBP on the installation which considers available information on the conditions of the facilities, the results of facility inspections and evaluations, and incidents of lead toxicity resulting from LBP - gives priority to finding and reducing or eliminating the risk of existing hazardous conditions in high-priority facilities - emphasizes in-place management to control existing hazards and reduce the risk of hazardous exposure to acceptable levels - considers abatement of LBP as part of the normal facility renovation and

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
	<p>upgrade programs when it is cost-effective</p> <p>– ensures precautions and procedures are incorporated into all maintenance, repair, renovation, and upgrade activities which are performed in-house, by contract, or self-help and which disturb painted surfaces known or likely to contain lead.</p>
T4.1.3. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number T4.20.2. It was moved to facilitate consistency between TEAM manuals.)
T4.1.4. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number T4.20.1. It was moved to facilitate consistency between TEAM manuals.)
T4.1.5. Paint used in all facilities, industrial and nonindustrial, will not contain more than 0.06 percent lead by weight of the nonvolatile solids (USAF/CC Policy Letter 24 May 1993, para 12).	Verify that paint with more than 0.06 percent lead by weight of the nonvolatile solids is not used or stored for future use at the installation.
T4.1.6. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number T4.15.1. It was moved to facilitate consistency between TEAM manuals.)
T4.1.7. Installations are required to perform a Lead Toxicity Investigation (LTI) when children with elevated blood lead levels have been identified at the installation (USAF/CC Policy Letter, para 14).	<p>Determine if the installation has ever had a case of elevated blood lead levels.</p> <p>Verify that the LTI team consists of representatives from BEE, Public Health Officer (PHO), Public Affairs (PA), and Judge Advocate (JA) as needed.</p> <p>Verify that an LTI was conducted.</p>
T4.1.8. Each closure installation is required to have and document a LBP survey of high-priority facilities (AFBCA Policy Letter, 4 November 1993, para 6(a)) [Moved April 1999].	<p>(NOTE: This was originally checklist item number T4.4.1. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the installation has a LBP survey of high-priority facilities.</p> <p>Verify that the survey identifies where LBP exists on the installation.</p> <p>Verify that the survey is documented in an installation LBP Survey Report.</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>T4.1.9. Installations are required to use in-place management first to reduce risk of hazardous exposure (AFBCA Policy Letter, 4 November 1993, para 6(a)(2) and 6(a)(3)) [Moved April 1999].</p>	<p>Verify that the survey is incorporated in the installation's Environmental Baseline Survey (EBS).</p> <p>(NOTE: If the LBP survey has not been accomplished prior to the completion of the installation-wide EBS, a data gap is identified in the EBS report, and LBP sampling is a part of the subsequent EBS effort.)</p> <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p> <p>(NOTE: This was originally checklist item number T4.4.2. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Determine whether LBP has been found to exist.</p> <p>Verify that installations use in-place management first to reduce risk of hazardous exposure to acceptable levels.</p> <p>Verify that abatement is performed only when in-place management will not control the hazard effectively.</p> <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p>
<p>T4.1.10. All pre-1978 housing is required to be surveyed before being transferred (AFBCA Policy Letter, 4 November 1993, para 6(a)(3)) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number T4.4.3. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: Without a survey, LBP is assumed to be present if the housing was constructed prior to 1978.)</p> <p>Verify that all pre-1978 housing is surveyed before being transferred.</p> <p>(NOTE: This requirement does not apply to the following types of housing:</p> <ul style="list-style-type: none"> - housing intended for the elderly or persons with disabilities, unless any child under 6 yr of age is expected to reside in it - 0-bedroom dwellings (efficiency apartments and dormitories).) <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p>
<p>T4.1.11. Housing constructed prior to 1978 is required to be inspected prior to property</p>	<p>(NOTE: This was originally checklist item number T4.4.4. It was moved to facilitate consistency between TEAM manuals.)</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
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<p>conveyance (AFBCA Policy Letter, 4 November 1993, para 6(b) and Under Secretary of Defense Letter, Asbestos, Lead Paint, and Radon Policies at BRAC Properties, 31 October 1994) [Moved April 1999].</p> <p>T4.1.12. Closure installations are required to comply with applicable environmental protection regulations (AFBCA Policy Letter, 4 November 1993, para 8) [Moved April 1999].</p>	<p>Verify that housing constructed prior to 1978 is inspected prior to property conveyance to determine the condition of all interior and exterior painted surfaces and whether LBP hazards exist.</p> <p>Verify that the results of this inspection are documented in an installation LBP Inspection Report and are provided to prospective purchasers or transferees of BRAC property.</p> <p>(NOTE: Inspection is not required when the building is scheduled for demolition by the transferee and the transfer document prohibits occupation of the building prior to the demolition, and the building is scheduled for nonresidential use. If the building is scheduled for residential use, the transferee conducts renovation consistent with the regulatory requirements for the abatement of LBP hazards.)</p> <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p> <p>(NOTE: This was originally checklist item number T4.4.8. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the installation complies with applicable environmental regulations.</p> <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>T4.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>T4.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this checklist (A finding under this check list item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

COMPLIANCE CATEGORY: TOXIC SUBSTANCES MANAGEMENT U.S. TEAM Guide: ECAMP Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
LBP MANAGEMENT T4.10 Notification Requirements T4.10.1. Air Force housing offices are required to begin LBP disclosure notification (USAF Disclosure Policy, 19 August 1996) [Added December 1997]. T4.10.2. The installation is required to make all LBP Inspection and Survey Reports available to all potential recipients of closure installation property prior to conclusion of transfer agreements (AFBCA Policy Letter, 4 November 1993, para 6(e)) [Moved April 1999].	<p>Verify that Air Force housing offices began disclosure activities by 6 September 1996 for all personnel being newly assigned to pre-1978 Military Family Housing (MFH).</p> <p>Verify that Air Force housing offices began LBP disclosure activities by 6 February 1997 for personnel already assigned to pre-1978 MFH units.</p> <p>(NOTE: This was originally checklist item number T4.4.7. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the installation makes all LBP Inspection and Survey Reports available to all potential recipients of closure installation property prior to conclusion of transfer agreements.</p> <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
<p>LBP</p> <p>T4.15</p> <p>Training Requirements</p> <p>T4.15.1. Air Force personnel who perform tests for LBP and work on painted surfaces are required to be trained (USAF/CC Policy Letter 24 May 1993, para 13) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number T4.1.6. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that at least one person from BCE has received USEPA certification.</p> <p>Verify that the certified individual trains others on the proper precautions to take and potential hazards.</p> <p>Verify that a minimum level of training which includes the following is provided for all workers who perform tasks which disturb painted surfaces:</p> <ul style="list-style-type: none"> - potential hazards of LBP - work practices to reduce and control dust and debris - handling of debris - hygiene - cleanup procedures. <p>Verify that workers who will be performing larger jobs in which simple work practices will not reliably reduce or control dust and those who will be assisting in LBP evaluations have received additional training in Occupational Safety and Health Act (OSHA) and Housing and Urban Development (HUD) requirements.</p>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS: September 1999
LBP T4.20 Work Practice Standards T4.20.1. Prior to the start of facility maintenance, repair, modification, and renovation activities, it is required to be determined if LBP is present if the activity will disturb painted surfaces (HQ USAF/CC Policy Letter 24 May 1993, para 11) [Moved April 1999] . T4.20.2. The identification and evaluation of existing and potential LBP hazards is required to be done according to specific procedures (USAF/CC Policy Letter 24 May 1993, para 7) [Moved April 1999] .	<p>(NOTE: This was originally checklist item number T4.1.4. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that, prior to the start of maintenance, modification, or renovation activities, it is determined if LBP is going to be disturbed.</p> <p>(NOTE: This was originally checklist item number T4.1.3. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that, depending on local circumstances, one of the following is used to identify and evaluate existing and potential LBP hazards:</p> <ul style="list-style-type: none"> -evaluations of observations from routine facility inspections and activities such as military family housing (MFH) walk-throughs, fire and safety inspections, inspections for family day care home licensing, and occupant reports of deteriorated paint -inspections and evaluations specifically designed to locate existing and potential LBP hazards so that appropriate measures can be taken to avoid hazardous lead exposures -facility investigations to determine the source of documented lead exposure. <p>Verify that facility personnel who conduct routine inspections have been instructed to report signs of paint deterioration or children chewing on painted surfaces in high- priority facilities.</p> <p>Verify that there are procedures in place to document and respond to information reported from inspections and occupants concerning potential LBP problems and the resulting evaluations and actions.</p> <p>Verify that facility inspections that are done specifically to identify LBP problems meet the following:</p> <ul style="list-style-type: none"> -they are focused on high-priority facilities and areas within those facilities with painted surfaces in deteriorated condition

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<p>T4.20.3. All defective paint surfaces are required to be assumed to be an immediate hazard until test results show otherwise (AFBCA Policy Letter, 4 November 1993, para 6(b)) [Moved April 1999].</p>	<ul style="list-style-type: none"> -the evaluations are performed by a team consisting of BEE and BEE representatives or by a qualified contractor -reports of the data results and resulting actions are collected, consolidated, and analyzed by the Chief, Aerospace Medicine for reporting through Air Force medical channels -permanent records of facility evaluations are maintained by the BCE and/or BEE. <p>(NOTE: This was originally checklist item number T4.4.5. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that all defective paint surfaces are assumed to be an immediate hazard until test results show otherwise.</p> <p>(NOTE: This requirement does not apply to housing units with negative LBP survey results; their defective paint surfaces are not a LBP hazard.)</p> <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p>
<p>T4.20.4. Installations are required to abate LBP hazards in target housing facilities constructed prior to 1960 (AFBCA Policy Letter, 4 November 1993, para 6(c) and Under Secretary of Defense Letter, Asbestos, Lead Paint, and Radon Policies at BRAC Properties, 31 October 1994) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number T4.4.6. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that inspections for LBP and LBP hazards are performed, and the hazards are abated for housing that meets the following criteria:</p> <ul style="list-style-type: none"> - it was constructed prior to 1960 - children are likely to reside in it after the transfer. <p>(NOTE: This requirement does not apply to the following situations:</p> <ul style="list-style-type: none"> - housing intended for the elderly or persons with disabilities, unless any child under 6 yr of age is expected to reside in it - 0-bedroom dwellings (efficiency apartments and dormitories) - when the building is scheduled for demolition by the transferee and the transfer document prohibits occupation of the building prior to demolition - when the building is scheduled for nonresidential use and the transferee agrees to conduct renovation consistent with the regulatory requirements for LBP hazard.) <p>(NOTE: See Appendices 11-2, 11-3, and 11-4 for informational attachments to the AFBCA Policy Letter.)</p>

Appendix 11-1

Summary of Likelihood of Lead-Based Paint (LBP) Being Present and Regulation/Guidelines Which Normally Must be Followed (USAF/CC Policy Letter, 24 May 1993)

High Priority Facilities

Facility Type	LBP Likely	HUD	OSHA	RCRA	AIR
MFH/Day Care Home, Before 1980	Yes	Yes	Yes	Yes	No
MFH/Day Care Home, During/After 1980	No	Yes	No	No	No
Other High Priority Facilities Before 1980	Yes	Yes	Yes	Yes	No
Other High Priority Facilities During/After 1980, Ferrous Metal Surface	Yes*	Yes	Yes	Yes	No
Other High Priority Facilities, During/After 1980, Other Surfaces	No**	Yes	No	No	No

Other Facilities (Not High-Priority)

Facility Type	LBP Likely	HUD	OSHA	RCRA	AIR
Steel Structures	Yes	No	Yes	Yes	Yes
Industrials	Yes	No	Yes	Yes	No
Painted Yellow Pavement Markings	Yes	No	Yes	Yes	No
Nonindustrials, Ferrous Metal Surfaces	Yes*	No	Yes	Yes	No
Nonindustrials, During/After 1980, Other Surfaces	No**	No	No	No	No

* CPSC restrictions uncertain but common practices favor lead present.

** CPSC restriction uncertain but common practices favor lead absent.

HUD - Housing and Urban Development Interim Guidelines

OSHA - Occupational Safety and Health Administration

RCRA - *Resource Conservation and Recovery Act*

AIR - National Primary and Secondary Ambient Air Quality Standards

CPSC - Consumer Product Safety Council

MFH - Military Family Housing

NOTES:

1. Likelihood of finding LBP on a particular surface in a facility is based on when it was constructed (before 1980 or during/after 1980), applicability of CPSC restrictions on use of LBP, and common painting practices.
2. Although LBP may not be likely, some precautions described in the HUD guidelines will normally be considered in high priority facilities since children are potentially at risk and there is some possibility the LBP is present.

Appendix 11-2

LBP Sampling Strategies for Closure Bases (USAF/CC Policy Letter, 04 November 1993)

Housing Sampling Strategy

Number of Units or Buildings	Number of Units or Buildings to be Tested
≤ 20	All
≤ 40	31
≤ 60	38
≤ 80	42
≤ 100	45
≤ 200	51
≤ 300	54
≤ 400	55
≤ 600	56
≤ 1000*	56

* When the total number of units exceed 1000, test 58 of the units.

(NOTE: The above sampling strategy should be used for housing constructed at the same time and having a common paint history. The units chosen for testing should be selected randomly so they represent accurately the total population of units or buildings being considered for possible abatement. 100 percent testing will be accomplished on high-priority facilities other than housing.)

Quantifying Lead in Interior and Exterior Paint.

Items to be tested	Sampling specifics
Interior	
Baseboard	1 in each area
Ceiling	1 in each area
Crown molding	1 in each area
Door	Surface of door and 1 side of the frame on a representative interior door in each area
Fireplace	1 item per housing unit
Floor	1 in each area
Radiator	1 item per housing unit
Shelf	1 in each area
Shelf support	1 in each area
Stairs	Riser, tread, stripper, newel post, railing cap, balustrade
Wall	Upper and lower wall, chair rail in each area
Window	Sash, casing, and sill on a representative window
Exterior	
Bulkhead	1 item per housing unit
Ceiling	1 item per housing unit
Cornerboard	1 item per housing unit
Door	Surface of door and door casing

Items to be tested	Sampling specifics
Fence	1 item per housing unit
Floor	1 item per housing unit
Joist	1 item per housing unit
Lattice	1 item per housing unit
Lower Railing	1 item per housing unit
Painted Roofs	1 item per housing unit
Porch	1 item per housing unit
Railing cap	1 item per housing unit
Siding	1 item per housing unit
Stairs	Tread, riser, handrail
Support columns	1 item per housing unit
Trim	1 item per housing unit
Window	Sill, casing, and sash of representative window; sample cellar window if available

Appendix 11-3

Testing in Single Family Housing (USAF/CC Policy Letter, 04 November 1993)

Testing with the spectrum analyzer X-Ray Fluorescence (XRF) is recommended. If direct reading XRF is used, it is necessary to scrape the paint to determine substrate equivalent lead (SEL) for each different building component. This is because the variability of the direct reading XRF cannot be "averaged out" over a large number of samples as is the case in multi-family housing. All inconclusive results must be confirmed by laboratory testing.

Spectrum analyzer XRF:

Results are positive if reading is 1.3 mg/cm^2 or higher.

Results are inconclusive if reading is 0.8 to 1.2 mg/cm^2 .

Results are negative if reading is less than 0.8 mg/cm^2 .

Direct reading XRF:

Results are positive if the corrected lead concentration (CLC) is greater than or equal to 1.6 1.3 mg/cm^2 .

Results are inconclusive if the CLC is 0.5 to 1.5 mg/cm^2 .

Results are negative if the CLC is less than 0.5 mg/cm^2 .

Appendix 11-4

LBP Summary Chart for Housing to Be Conveyed (USAF/CC Policy Letter, 04 November 1993)

Requirements	Between Now and 1 January 1995		
	Pre-1960	1960 - 1977	1978 - Present
LBP Survey of High Priority Facilities (may assume LBP is present without testing).	X	X	NA
Inspection of painted surface with confirmed or assumed LBP.	X	X	NA
Treatment of defection LBP paint surfaces.	X	Only required if there is also pre-1960 housing**	NA
Disclosure	X	X	NA

** Treatment of 1960-1977 housing is not required under Title X. However, for consistency purposes, if a base chooses to treat pre-1960 housing under 24 CFR rather than abate under Title X, then 1960- 1977 housing should also be treated since it is a requirement under 24 CFR.

Requirements	After 1 January 1995		
	Pre-1960	1960 - 1977	1978 - Present
LBP Survey of High Priority Facilities (may assume LBP is present without testing).	X	X	NA
Inspection of painted surface with confirmed or assumed LBP.	X	X	NA
Treatment of defection LBP paint surfaces.	X	No action required	NA
Disclosure	X	X	NA

SECTION 12

WASTEWATER MANAGEMENT

Air Force Supplement, September 1999

A. U.S. Air Force Instructions (AFIs) and Policies

- HQ USAF/CE, Letter, *Double Liner and Leak Detection System Requirements for New Aircraft Crash Fire Rescue Training Facilities (CFRTF)*. This letter, dated 1 September 1995, corrects why some CFRTFs have recently been built with only a single liner.
- AFI 32-1067, *Water Systems*. This AFI, dated 25 March 1994, provides guidelines for managing wastewater systems at Air Force installations.
- AFI 32-7041, *Water Quality Compliance*. This AFI, dated 13 May 1994, applies to the generation, collection, treatment, reuse, and disposal of domestic and industrial wastewater, stormwater, nonpoint source runoff, sewage sludge, and water treatment residues.
- AFI 48-119, *Medical Service Environmental Quality Programs*. This AFI, dated 25 July 1994, identifies Medical Services roles and responsibilities.
- HQ USAF/CE Letter, *Oil/Water Separators Operations, Maintenance, and Construction*. This letter, dated 21 October 1994, outlines requirements for the management of existing oil/water separators and the construction of new oil/water separators.

B. Department of Defense (DOD) Directives and Instructions

- DODI 4715.6, *Environmental Compliance*. This instruction, dated 24 April 1996, implements policy, assigns responsibility, and prescribes procedures for achieving compliance with applicable Executive Orders (EO) and Federal, state, interstate, regional, and local statutory and regulatory environmental requirements. This DODI also designated the DOD Executive Agents to lead DOD implementation of key environmental issues. This DODI does not apply to the operations of U.S. military aircraft or to off-installation operational and training deployments. The Navy has been appointed the lead Executive Agent for implementation of the *Federal Water Pollution Control Act*.

C. Using the TEAM Guide for ECAMP

- Ensure that swimming pool filter backwash water and water treatment residuals, including sludge and process wastewater, from drinking water treatment plants are not discharged without a National Pollutant Discharge Elimination System (NPDES) permit.

D. Key Air Force/DOD Compliance Requirements

- Oil/Water Separators - Collected fuel, oil, grease, oily waste, solvents, cleaning compounds, corrosion control facility wastes, or other contaminants cannot be discharged to oil/water separators.
- Discharges To a Treatment Works - Installations that discharge to either a publicly owned treatment works (POTW) or a Federally owned treatment works (FOTW) must pretreat process wastewater having hazardous characteristics before discharging it to the treatment works.

- **Treatment Works Operation** - Personnel are required to be trained and certified and maintain certain operating logs and records. Operators are required to maintain pollution control logs and have plant-specific O&M manuals. Installations are required to eliminate Combined Sewer Overflows (CSO) and unauthorized connections of industrial wastewater and floor drains from industrial shops to domestic wastewater collection systems.
- **Fire Training Pits** - New live aircraft fire training facilities are required to be double lined with lead detection and operated as zero discharge facilities. Only uncontaminated fuel can be used in live aircraft fire training exercises.

E. Key Compliance Personnel

- **The Base Civil Engineer (BCE)/Environmental Management.** The BCE/Environmental Management is responsible for the preparation of all wastewater discharge permit applications, monitoring compliance with all approved NPDES permit conditions, and reporting requirements specified as in the NPDES permit. The BCE/Environmental Management is also responsible for developing a pre-treatment program in accordance with the pre-treatment provisions of 40 Code of Federal Regulations (CFR) 401 et seq. for all industrial process wastewater generated on the installation. BCE design departments are responsible for the design and construction of wastewater collection and treatment systems as needed on the installation. Training of personnel to meet proficiency levels consistent with local/state operator certification requirements is the responsibility of the BCE.
- **The Water and Waste Shop.** The Water and Waste Shop within BCE has responsibility for operations and maintenance of treatment plants, pretreatment facilities, pump stations, oil or water separators, and other associated facilities around the installation including taking timely and appropriate corrective actions when permit limits are exceeded. They also have process and discharge monitoring requirements to control treatment and comply with discharge permit requirements.
- **Bioenvironmental Engineering (BEE).** The BEE is responsible for monitoring wastewater discharge and stream water quality at selected locations around the installation.
- **Individual Shop Supervisors and Superintendents.** Individual shop supervisors and superintendents are responsible for ensuring that prohibited, unpermitted discharge of wastewater containing toxic or hazardous substances to the sanitary or stormwater systems does not occur from their shop in accordance with the installation wastewater regulation.

F. Key Air Force/DOD Compliance Definitions

- **Combined Sewer** - a wastewater collection system that collects both stormwater and wastewater (AFI 32-7041, Attachment 1).
- **Combined Sewer Overflow (CSO)** - direct discharge of untreated wastewater from a combined sewer (AFI 32-7041, Attachment 1).
- **Lift Station** - a wastewater collection system that pumps wastewater from a gravity sewer to a sewer or treatment plant at a higher elevation (AFI 32-7041, Attachment 1).
- **Point Source** - any discernible confined and discrete conveyance from which pollutants are or may be discharged, excluding agricultural stormwater discharges and return flows from irrigated agriculture. Point sources include: pipes, ditches, channels, tunnels, conduits, wells, discrete fissures, containers, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessels, or other floating crafts (AFI 32-7041, Attachment 1).
- **Stormwater Discharge Associated with Industrial Activity** - the discharge from any conveyance used for collecting and conveying stormwater directly related to manufacturing, processing, or storing raw materials at an industrial

plant. U.S. Environmental Protection Agency (USEPA) has categories of industrial activities that apply to Air Force installations, including (AFI 32-7041, Attachment 1):

1. transportation facilities
2. steam electric power generating facilities
3. treatment works treating domestic sewage
4. construction sites.

G. Additional Records To Review

- As-built drawings

H. Additional Physical Features To Inspect

- Fire training pit
- Laboratory facilities

I. People To Interview

- Base Civil Engineering, including:
- Environmental Coordinator
- Collection, Treatment, and Distribution Facility Operators
- Bioenvironmental Engineering, Wastewater
- Wastewater Treatment Plant Superintendent
- Environmental Management
- Water, wastewater shop personnel for oil/water separators, and lift station operators
- Fire Department personnel responsible for fire training

J. Guidance for Air Force Supplement Wastewater Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	WA.1.1 through WA.1.8
Missing Checklist Items	WA.2.1
Miscellaneous Checklist Items (NOTE: These checklist items have been moved to WA.1 to promote consistency between TEAM manuals.)	WA.4.1 through WA.4.4
POTW/FOTW Operations	WA.20.1 through WA.20.9
Discharges to POTWs/FOTWs	WA.25.1 through WA.25.4
Fire Training Pit Discharges	WA.95.1 through WA.95.3

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<p>WA.1</p> <p>ALL INSTALLATIONS</p> <p>WA.1.1. Copies of all relevant Federal, state, and local regulations on wastewater management should be maintained at the installation (MP) [June 1997].</p> <p>WA.1.2. The installation is required to conduct a water quality compliance program assessment (AFI 32-7041, para 3.2 through 3.5).</p>	<p>Determine if the following are current and readily available:</p> <ul style="list-style-type: none"> -EO 12088, <i>Federal Compliance With Pollution Standards</i>. -40 CFR 122, <i>USEPA Administered Permit Programs: The NPDES System</i>. -40 CFR 136, <i>Test Procedures for the Analysis of Pollutants</i>. -40 CFR 403, <i>General Pretreatment Regulations for Existing and New Sources of Pollution</i>. -40 CFR 413, <i>Electroplating Point Source Category</i>. -40 CFR 433, <i>Metal Finishing Point Source Category</i>. -40 CFR 459, <i>Photographic Point Source Category</i>. -40 CFR 460, <i>Hospital Point Source Category</i>. -40 CFR 503, <i>Standards for the Use or Disposal of Sewage Sludge</i>. -HQ USAF/CE Policy letter, <i>Double Liner and Leak Detection System Requirements for New Aircraft Crash Fire Rescue Training Facilities (CFRTFS)</i>, dated 01 September 1995. -AFI 32-1067, <i>Water Systems</i>. -AFI 32-7041, <i>Water Quality Compliance</i>. -AFI 48-119, <i>Medical Service Environmental Quality Programs</i>. -HQ USAF/CE Letter, 21 Oct 1994, <i>Oil/Water Separators Operations, Maintenance, and Construction</i>. -installation wastewater regulations. -site specific operations and maintenance manual, operating instructions, or standard operating procedures (SOPs). -applicable state and local regulations. <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the Environmental Protection Committee (EPC) informed as needed.</p> <p>Verify that permits are reviewed semiannually to ensure that the installation is meeting the compliance requirements set by the permits.</p> <p>Verify that the following are reviewed monthly:</p> <ul style="list-style-type: none"> -data generated from monitoring activities -discharge monitoring reports to ensure correct pretreatment and timely submittal of reports -inspections by regulatory agencies to ensure that corrective action plans resolve Open Enforcement Actions within required time frames.

<p align="center">COMPLIANCE CATEGORY: WASTEWATER MANAGEMENT U.S. TEAM Guide: ECAMP Supplement</p>	
<p align="center">REGULATORY REQUIREMENTS:</p>	<p align="center">REVIEWER CHECKS: September 1999</p>
<p>WA.1.3. Bioenvironmental Engineering Services (BES) is responsible for developing and maintaining waste stream inventories and maintaining a master record of all monitoring points (AFI 48-119, para 9.4.1 and 9.4.2).</p>	<p>Verify that the BES is maintaining an inventory and a master record of monitoring points.</p> <p>(NOTE: Typical areas which might be included in the inventory and monitoring record include:</p> <ul style="list-style-type: none"> - battery shop - corrosion control - engine shop - motor pool - paint shop - plating shop - pesticide shop - petroleum, oil, and lubricant (POL) area - photo processing - wash racks - lift stations - stormwater outfall.)
<p>WA.1.4. The BES is required to conduct periodic evaluations of the treatment works' compliance with applicable standards (AFI 32-1067, para 4.4).</p>	<p>Verify that BES conducts periodic evaluations of pollution control facilities' compliance with applicable standards.</p>
<p>WA.1.5. Existing oil/water separators are required to be managed according to specific parameters (HQ USAF/CE Letter, 21 Oct 1994, <i>Oil/Water Separators Operations, Maintenance, and Construction</i>) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number WA.4.2. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that each installation has developed and implemented a plan to assess the need for, and effectiveness of, existing oil/water separators with the goal of consolidation of ineffective units.</p> <p>Verify that an inventory has been done of all existing oil/water separators that identifies all sources of pollutants being discharged from individual shops connected to each separator and the mode of discharge.</p> <p>(NOTE: For the inventory, oil/water separators include online oil and grease/fuel traps and small oil/water separators outside of hangers, corrosion control facilities, fuel transfer/storage operations, AGE equipment maintenance shops, wash racks etc. Mode of discharge includes storm sewer, sanitary sewer, septic tank, or direct discharge to waters of the United States.)</p> <p>Verify that the separators are identified on the installation as-built drawings and</p>

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<p>WA.1.6. Installations are required to perform specific operation and maintenance actions in relation to oil/water separators (HQ USAF/CE Letter, 21 Oct 1994, <i>Oil/Water Separators Operations, Maintenance, and Construction</i>) [Moved April 1999].</p>	<p>the information is updated as changes occur.</p> <p>(NOTE: This was originally checklist item number WA.4.3. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that oil/water separator sludge is removed and tested regularly prior to disposal to ensure compliance with sludge disposal requirements.</p> <p>Verify that, if the sludge is hazardous, immediate action is taken to identify and eliminate the source of hazardous pollutants.</p> <p>Verify that, if sludge is disposed of as a hazardous waste, the wastewater is retested to ensure compliance.</p> <p>Verify that there is a primary office of responsibility (functional organization for the management of pollutants discharged and CE for maintenance).</p> <p>Verify that sources discharging to oil/water separators institute the following practices:</p> <ul style="list-style-type: none"> - dry cleanup procedures - plugging floor drains to oil/water separators that carry industrial wastewater from shops.
<p>WA.1.7. The construction of new oil/water separators is restricted by specific parameters (HQ USAF/CE Letter, 21 Oct 1994, <i>Oil/Water Separators Operations, Maintenance, and Construction</i>) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number WA.4.4. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that new separators are not being built either through the Real Property Maintenance or Military Construction projects until the effectiveness evaluation of existing separators is done and a consolidated program has been established.</p> <p>Verify that new separators have a double liner with leak detection systems for new separators, including associated oil recovery tanks.</p> <p>Verify that gravity separators are not built for wastewater containing emulsified petroleum residuals, aqueous film forming foam releases, and other nonfloating pollutants from industrial operations.</p> <p>Verify that waste streams will not be mixed if they are discharged to the sewer systems.</p>
<p>WA.1.8. Normal maintenance activities, such as aircraft</p>	<p>(NOTE: This was originally checklist item number WA.4.1. It was moved to</p>

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<p>refueling operations, must not release fuel, oil, grease, and other contaminants (AFI 32-7041, para 2.10) [Moved April 1999].</p>	<p>facilitate consistency between TEAM manuals.)</p> <p>Verify that adequately sized oil/water separators are used to remove incidental releases of residual fuel, oil, grease, and other oily wastes when it is not possible to use dry cleanup or other cleanup methods.</p> <p>Verify that collected fuel, oil, grease, oily waste, solvents, cleaning compounds, or corrosion control facility waste or other contaminants are not being discharged to an oil/water separator by identifying which oil/water separators are located in areas that these types of wastes are generated, such as:</p> <ul style="list-style-type: none"> - corrosion control - the paint shops - motor pools - aircraft maintenance - print shops. <p>(NOTE: If the oil/water separator is hooked into the wastewater treatment works and the discharge of inappropriate substances is sufficient to create a problem at the treatment works, write up the finding under a Federal regulation as found in the section titled Discharges to POTWs/FOTWs.)</p>

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<p>WA.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>WA.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this check list (A finding under this checklist item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but not addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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<p>WA.4</p> <p>MISCELLANEOUS CHECKLIST ITEMS</p> <p>WA.4.1. Checklist item moved [Moved April 1999].</p> <p>WA.4.2. Checklist item moved [Moved April 1999].</p> <p>WA.4.3. Checklist item moved [Moved April 1999].</p> <p>WA.4.4. Checklist item moved [Moved April 1999].</p>	<p>(NOTE: This was moved to checklist item number WA.1.8. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WA.1.5. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WA.1.6. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WA.1.7. It was moved to facilitate consistency between TEAM manuals.)</p>

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<p>WA.20</p> <p>POTW/FOTW OPERATIONS</p> <p>WA.20.1. Operators of water treatment plants and wastewater treatment plants are required to meet specific training requirements (AFI 32-1067, para 8.1).</p> <p>WA.20.2. Supervisors are required to train all employees and enforce applicable safety standards (AFI 32-1067, para 9) [Revised December 1997].</p>	<p>Verify that new operators receive classroom training and extensive supervised on-the-job training before being assigned to critical tasks.</p> <p>Verify that experienced personnel receive technical refresher courses and upgrade training.</p> <p>(NOTE: Training requirements may be met by one of the following means:</p> <ul style="list-style-type: none"> - AF training available through technical schools, career development correspondence courses, and on-the-job training - civilian training courses available at educational institutions, government agencies, and professional and technical associations - correspondence courses from accredited institutions for operators in areas that do not have local resident courses.) <p>Verify that all employees are familiar with the safety instructions in the following documents, as applicable:</p> <ul style="list-style-type: none"> - AFOSH STD 127-10, <i>Civil Engineering</i>. - AFOSH STD 127-25, <i>Confined Spaces</i>. - AFOSH STD 161-21, <i>AF Hazard Communication Standard</i>. <p>(NOTE: AFI 32-1067 also refers to AFM 91-32, but this AFM has been rescinded since the publication of the AFI.)</p> <p>Verify that the supervisor maintains current BES baseline and annual industrial hygiene survey reports.</p> <p>(NOTE: The supervisor should use these reports to train workers on occupational health hazards.)</p> <p>Verify that supervisors make safety instructions readily available to all operating personnel.</p> <p>Verify that supervisors train facility personnel on safety procedures and equipment and enforce their proper use at all times.</p> <p>(NOTE: Once trained, individual workers are personally responsible for following safe procedures.)</p>

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<p>WA.20.3. Major treatment works are required to have plant-specific O&M manuals (AFI 32-1067, para 7.3.1).</p>	<p>Verify that the treatment works has plant-specific O&M manuals.</p> <p>(NOTE: Domestic and industrial wastewater treatment plants are the primary facilities covered by this instruction.)</p> <p>Verify that, if the activities are present on the installation, manuals specifically address the following areas of concern:</p> <ul style="list-style-type: none"> - metal finishing and electroplating - vehicle and aircraft wash facilities - aircraft maintenance - paint stripping - nondestructive inspection - painting - solvent cleaning - battery shops - photo labs - hospitals - aircraft deicing - fire training. <p>Verify that facility manuals address the proper operation and maintenance of oil/water separators and lift stations.</p>
<p>WA.20.4. Operators of treatment works are required to prepare pollution control logs (AFI 32-1067, para 10.1.2).</p>	<p>Verify that operators prepare the following forms:</p> <ul style="list-style-type: none"> - AF Form 1462, <i>Water Pollution Control Utility Operating Log (General)</i>. - AF Form 1463, <i>Water Pollution Control Plant Operating Log--Supplementary</i>.
<p>WA.20.5. Treatment facilities are required to keep specific information on hand at the facility (AFI 32-1067, para 10.2).</p>	<p>Verify that the following information is on hand and up to date at the facility:</p> <ul style="list-style-type: none"> - plant specific O&M manuals and applicable Air Force publications for each treatment system - system operating instructions with single line drawings, include operational and compliance monitoring procedures - as-built drawings along with other system plans and blueprints - shop drawings, catalogue cuts, and other equipment information or literature.
<p>WA.20.6. Maintenance records for the facility are required to be maintained</p>	<p>Verify that the facility develops and maintains a maintenance plan that includes the following:</p> <ul style="list-style-type: none"> - a recurring work schedule

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<p>(AFI 32-1067, para 10.3).</p> <p>WA.20.7. Lift stations are required to be designed and operated to remain operable during power failures and have redundant pumps to provide adequate capacity for handling the flow when one pump is out of service (AFI 32-7041, para 2.5).</p> <p>WA.20.8. Wastewater collection systems and pumping station are not allowed to bypass or permit overflow into storm sewers or surface water (AFI 32-7041, para 2.6.1).</p> <p>WA.20.9. Installations are required to eliminate CSOs and unauthorized connections of industrial wastewater and floor drains from industrial shops to domestic waste water collection systems (AFI 32-7041, para 2.6.2).</p>	<ul style="list-style-type: none"> - a maintenance history for each major piece of equipment - an essential spare parts list - a long range maintenance and improvement plan. <p>Verify that major lift stations provide stand-by power generators, portable power generators, or the use of two independent power sources at each stations.</p> <p>Verify that smaller lift stations provide a connection for a portable generator.</p> <p>Verify that sound and visual alarms are installed at pump stations to alert maintenance staff when pump failure occurs.</p> <p>Verify that there are backup batteries or other emergency power sources to retain alarm data during power failure.</p> <p>Verify that there are redundant pumps to provide adequate pumping capacity for handling the maximum wastewater when one pump is out of service.</p> <p>Verify that the collection systems and pumping stations are designed so that bypass or overflow into storm sewers or surfaces waters is not possible.</p> <p>Verify that the installation has been eliminating CSOs and unauthorized connections of industrial wastewater and floor drains from industrial shops to domestic wastewater collection systems.</p>

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<p>WA.25</p> <p>DISCHARGES TO POTWs/FOTWs</p> <p>WA.25.1. BCE is required to develop an installation standard wastewater treatment procedure to govern the discharge of industrial and nondomestic waste to the sanitary system by generating activities (AFI 32-1067, para 7.3.2).</p> <p>WA.25.2. Generators are required to use pollution control techniques to minimize pollutant discharges (AFI 32-1067, para 7.3.2).</p> <p>WA.25.3. Hazardous waste may not be discharged to the collection system (AFI 32-1067, para 7.3.2).</p> <p>WA.25.4. Wastewaters from operations which produce hazardous waste, such as aircraft maintenance operations, are required to meet pretreatment standards</p>	<p>Verify that the installation has an installation standard wastewater treatment procedure to govern the discharge of industrial and nondomestic waste to the sanitary system by generating activities.</p> <p>Verify that BCE outlines procedures for discharging industrial wastes to the sanitary system.</p> <p>Verify that the procedures describe the following:</p> <ul style="list-style-type: none"> - pretreatment requirements - discharge procedures - effluent limitations for industrial waste. <p>(NOTE: The Installation Commander or the municipal wastewater authority can impose these requirements.)</p> <p>Verify that generators follow the instructions given by BCE.</p> <p>Verify that generators of discharges minimize the discharge of pollutants using the pollution control techniques in AFI 32-7080.</p> <p>(NOTE: See applicable checklist items in the Pollution Prevention portion of the Other Environmental Issues Section.)</p> <p>Verify that no hazardous waste is discharged to the collection system.</p> <p>Determine if wastewaters from hazardous waste producing activities such as aircraft maintenance are discharged to the FOTW/POTW.</p> <p>Verify that discharging facilities are meeting any pretreatment standard assigned to the facility prior to discharge to the FOTW/POTW.</p>

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before being discharged to the wastewater treatment plant or be handled as hazardous waste (AFI 32-7041, para. 2.11).	Verify that the FOTW/POTW has been notified of any constant or possible hazardous discharges.

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<p>WA.95</p> <p>FIRE TRAINING PIT DISCHARGES</p> <p>WA.95.1. Installations with live fire training facilities that are connected to onsite wastewater treatment plants should discharge the effluent gradually to avoid adverse impact on the wastewater treatment plants (MP).</p> <p>WA.95.2. New live aircraft fire training facilities are required to be operated as zero discharge facilities (AFI 32-7041, para 2.9 and HQ USAF/CE letter, 01 September 1995).</p> <p>WA.95.3. Only uncontaminated fuel may be used in live aircraft fire training exercises (AFI 32-7041, para 2.9).</p>	<p>Determine if there is an effective fuel and water separator.</p> <p>Verify that proper maintenance of the fuel and water separator is being done and look for visible discharge of fuel in the effluent.</p> <p>Determine if there are self-monitoring reports on fuel and water separators.</p> <p>Determine if onsite storage treatment of wastewater is done before discharging to an onsite wastewater treatment plant or if it is discharged directly to surface water sources.</p> <p>Determine the status of the wastewater treatment plant discharge permit for compliance with permit requirements.</p> <p>Determine the type and quality of fuel used for fire training and verify that it is free from contaminant that can cause adverse environmental impact on the environment.</p> <p>Verify that new facilities have provisions for protecting the groundwater, including a groundwater monitoring system and double-lined basins with leak detection systems.</p> <p>Verify that regulatory approval was obtained prior to contract award for construction.</p> <p>(NOTE: HQ USAF/CEC has allowed several projects to proceed with a single liner instead of the double liner provided it satisfied all state and local environmental requirements and written approval was received from the regulators.)</p> <p>Verify that only uncontaminated fuel is used in all live aircraft fire training exercises.</p>

SECTION 13

WATER QUALITY MANAGEMENT

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A. U.S. Air Force Instructions (AFIs) and Policies

- AFI 32-1066, *Plumbing Systems*. This AFI, dated 4 May 1994, provides guidance for personnel who maintain and operate plumbing systems on Air Force installations.
- AFI 32-1067, *Water Systems*. This AFI, dated 25 March 1994, provides guidelines for managing water and wastewater systems at Air Force installations.
- HQ USAF/SG Policy Letter, *Water Testing in Child Development Centers (CDCs)*. This letter, dated 21 October 1992, expands and clarifies the requirements for the monitoring of drinking water at Air Force CDCs.

B. Department of Defense (DOD) Directives and Instructions

- DODI 4715.6, *Environmental Compliance*. This DODI, dated 24 April 1996, implements policy, assigns responsibility, and prescribes procedures for achieving compliance with applicable Executive Orders (EO) and Federal, state, interstate, regional, and local statutory and regulatory environmental requirements. This DODI also designated the DOD Executive Agents to lead DOD implementation of key environmental issues. This DODI does not apply to the operations of U.S. military aircraft or to off-installation operational and training deployments. The Executive Agent for drinking water quality is the Air Force.

C. Using the TEAM Guide for ECAMP

- No additional instructions.

D. Key Air Force/DOD Compliance Requirements

- Backflow Prevention - Installations are required to have a Backflow Program Manager. A survey of the installation plumbing devices and systems is required every 5 yr. Bioenvironmental Engineering Services (BES) assigns a degree of hazard to each cross-connection using the uniform plumbing code (UPC). Only approved backflow prevention devices may be used. An inventory of all backflow prevention devices is required.
- Operation of Drinking Water Systems - Water treatment plant operators must be trained and certified. Each separate water source is required to have a meter and a raw water sampling point. Each active well should have an air line or electric depth gauge. Only flux and solder with less than 0.2 percent lead can be used and pipes and pipe fittings are required to contain less than 8 percent lead.
- Water Supply System Documentation - Water treatment facilities are required to prepare a monthly report of daily operations data reports using AF Form 1461 and 1460. They are also required to create a yearly operating report. When maximum contaminant levels (MCLs) are exceeded, specific personnel at the installation must be notified.
- CDCs - Drinking water at CDCs is required to be sampled monthly.

E. Key Compliance Personnel

- Armstrong Lab. As an option to using area certified labs, Armstrong Lab, Brooks Air Force Base, Texas, provides services to complete all required laboratory, chemical, physical, and radiological analyses for drinking water. Armstrong Lab maintains a potable water quality data repository of the last 10 yr and disseminates analytical results as required to the using activities and commands.
- Director of Base Medical Services. Director of Base Medical Services, through the BEE Section, is responsible for proper sample collection from drinking water systems at Air Force installations and determining compliance with drinking water standards. Coordination with Armstrong Lab, interpretation of results of water analyses, and notifications to state regulatory authorities when MCLs are exceeded are also the responsibilities of the Director of Base Medical Services.
- Base Civil Engineer (BCE). The BCE designs, constructs, and operates the water supply system to provide sufficient drinking water to installation personnel. The BCE is responsible for providing adequate water treatment to assure drinking water does not exceed the MCLs established under primary drinking water regulations. Training of operating personnel to meet proficiency levels consistent with the operator certification requirements that apply to their location is also the responsibility of the BCE. The BCE maintains an up-to-date map of the complete potable water system, makes repairs, and maintains the systems. The BCE is also responsible for negotiating and maintaining the installation's water supply contract.
- Environmental Management (EM). The EM also plays a role in compliance with the drinking water regulations. At bases with an EM Water Quality Program manager, the program manager is the base representative on all environmental water issues to Federal, state, and local regulatory agencies. EM is responsible for notifying state regulatory authorities when MCLs are exceeded. Additionally, coordination with the BEE and BCE on changes to the drinking water regulations is an integral function of this office.

F. Key Air Force/DOD Compliance Definitions

- None.

G. Additional Records To Review

- Records, including any petition for review, of facility projects that may potentially cause contamination of a sole source aquifer through its recharge zone
- Equipment calibration records

H. Additional Physical Features To Inspect

- Onsite laboratory analysis facilities
- Aircraft watering points

I. People To Interview

- Base Civil Engineering, including:
- Environmental Coordinator
- Collection, Treatment, and Distribution Facility Operators
- Bioenvironmental Engineering
- Environmental Management
- Backflow Prevention Manager

J. Guidance for Air Force Supplement Water Quality Management Checklist Users

	REFER TO CHECKLIST ITEMS:
All Installations	WQ.1.1 through WQ.1.20
Missing Checklist Items	WQ.2.1
Miscellaneous Checklist Items (NOTE: These checklist items were moved to WQ.1 to facilitate consistency between TEAM manuals.)	WQ.4.1 through WQ.4.17
Water Supply Systems	
General	WQ.10.1 through WQ.10.5
Documentation	WQ.30.1 through WQ.30.8

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<p>WQ.1</p> <p>ALL INSTALLATIONS</p> <p>WQ.1.1. Copies of all relevant Federal, state, and local regulations on water quality should be maintained at the installation (MP).</p> <p>WQ.1.2. Installations are required to use municipal or regional water supply systems where feasible (AFI 32-1067, para 2).</p> <p>WQ.1.3. Installations can have dual water supply systems for potable and nonpotable water if certain conditions have been met (AFI 32-1067, para 12.1).</p> <p>WQ.1.4. Installations are required to have a Backflow Program Manager who fulfills specific responsibilities (AFI</p>	<p>Determine if the following are current and readily available:</p> <ul style="list-style-type: none"> -EO 12088, <i>Federal Compliance With Pollution Standards.</i> -40 CFR 141, <i>National Primary Drinking Water Regulations.</i> -40 CFR 149, <i>Sole Source Aquifers.</i> -AFI 32-1066, <i>Plumbing Systems.</i> -AFI 32-1067, <i>Water Systems..</i> -HQ USAF/SG Policy Letter, <i>Water Testing in Child Development Center (CDC)</i>, 21 October 1992. -applicable state and local requirements <p>Verify that the Installation Staff Judge Advocate reviews Federal, state, and local regulations that may affect ongoing and proposed activities and keeps the EPC informed as needed.</p> <p>Verify that the installation uses a municipal or regional water system where feasible.</p> <p>Verify that a life cycle cost analysis is performed to determine the most cost-effective approach.</p> <p>Verify that the following conditions are met by installations with dual water supply systems:</p> <ul style="list-style-type: none"> -BCE establishes and maintains a clearly defined separation of the two systems so that nonpotable water cannot contaminate the potable water system -the systems have approved backflow prevention devices to prevent contamination of potable water -the Major Command (MAJCOM) approves the dual system before construction and operation -connections between systems are avoided. <p>(NOTE: This was originally checklist item number WQ.4.1. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that an engineer or appropriate supervisor has been appointed the Backflow</p>

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<p>32- 1066, para 6, 8, and 12.2) [Moved April 1999].</p> <p>WQ.1.5. The installation's Backflow Program Manager is required to conduct a facility survey of plumbing devices and systems every 5 yr (AFI 32-1066, para 8 and 12.1) [Moved April 1999].</p>	<p>Program Manager.</p> <p>Verify that the Backflow Program Manager:</p> <ul style="list-style-type: none"> - maintains an aggressive program to identify, isolate, record, and correct cross- connections and other potential sources of distribution system contamination - makes sure plumbing personnel can properly test, install, maintain, and repair backflow prevention device - identifies and forecasts training requirements for BCE personnel - reviews all plans and drawings of new or modified water systems to identify potential cross-connections - maintains inspection records and the status of installation and upgrade actions. <p>(NOTE: Except for laboratory sinks and sinks with hose threaded faucets, backflow preventers integral to a standard plumbing fixture do not come under this program.)</p> <p>(NOTE: This was originally checklist item number WQ.4.2. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the Backflow Program Manager conducts a facility survey of plumbing devices and systems every 5 yr.</p> <p>Verify that records are updated to reflect the results of the survey.</p> <p>(NOTE: Military family housing is excluded from the survey unless underground sprinkler systems are installed.)</p> <p>(NOTE: The Backflow Program Manager coordinates the surveys with BES.)</p> <p>Verify that survey personnel locate backflow prevention devices, assess their adequacy, and determine the need for more devices.</p> <p>(NOTE: This information is used to determine potential or existing cross-connections and the degree of hazard they present.)</p> <p>Verify that the results of the survey are recorded on AF Form 848, <i>Inventory of Cross-Connection Control and Backflow Prevention Devices</i>.</p> <p>(NOTE: Except for laboratory sinks and sinks with hose threaded faucets, backflow preventers integral to a standard plumbing fixture do not come under this program.)</p>

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<p>WQ.1.6. BES is required to fulfill particular responsibilities with regard to cross-connections (AFI 32-1066, para 9) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number WQ.4.3. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that BES assigns a degree of hazard to each cross-connection, using the UPC.</p> <p>Verify that BES reviews plans for water system modification to prevent cross-connections and to identify existing cross-connections or other potential sources of contamination or pollution and recommends corrective action.</p>
<p>WQ.1.7. BCE personnel are required to eliminate the potential for cross-connections (AFI 32-1066, para 11) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number WQ.4.4. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the potential for cross-connection is eliminated.</p> <p>Verify that, if elimination is not feasible, approved prevention devices are installed.</p> <p>Verify that the devices installed prevent contamination of potable water supplies that are susceptible to backpressure or back-siphonage from fixtures, equipment, appliances, or buildings.</p> <p>Verify that, if the potable water supply is critical, approved backflow preventers are installed in parallel to allow maintenance or repair without system shutdown.</p>
<p>WQ.1.8. Installations are required to take specific actions with regard to existing backflow protection devices (AFI 32-1066, para 12.5) [Moved April 1999].</p>	<p>(NOTE: This was originally checklist item number WQ.4.5. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that existing backflow prevention devices are identified during the survey by a control number.</p> <p>Verify that unapproved devices are replaced in priority depending on the degree of hazard and without waiting for the devices to fail.</p> <p>(NOTE: MAJCOM/CE may be contacted for help when uncertain about a device's category or level of protection.)</p> <p>(NOTE: Except for laboratory sinks and sinks with hose threaded faucets, backflow preventers integral to a standard plumbing fixture do not come under this program.)</p>
<p>WQ.1.9. Severe cross-</p>	<p>(NOTE: This was originally checklist item number WQ.4.6. It was moved to</p>

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<p>connections are required to be eliminated immediately (AFI 32-1066, para 12.2) [Moved April 1999].</p> <p>WQ.1.10. Installations are required to meet specific requirements with regard to backflow prevention on new dry/wet fire suppression systems (AFI 32-1066, para 12.6) [Moved April 1999].</p> <p>WQ.1.11. Backflow prevention retrofit work is required to be performed when fire suppression systems are down for major renovation (AFI 32-1066, para 12.6) [Moved April 1999].</p> <p>WQ.1.12. Technicians who test and maintain backflow prevention devices are required to be certified by MAJCOM (AFI 32-1066, para 14 and 15) [Moved April 1999].</p> <p>WQ.1.13. Tests and inspections of backflow devices are required to be conducted on a schedule</p>	<p>facilitate consistency between TEAM manuals.)</p> <p>Verify that severe cross-connections are eliminated immediately.</p> <p>(NOTE: This was originally checklist item number WQ.4.7. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that double check valve backflow preventers are installed on new dry/wet fire suppression systems that use only water as a fire suppressant.</p> <p>Verify that a reduced pressure type backflow device is used where antifreeze or other hazardous chemicals are added.</p> <p>Verify that backflow preventers are approved and listed for fire protection use by acceptable testing agencies such as Underwriters' Laboratories or Factory Mutual.</p> <p>(NOTE: This was originally checklist item number WQ.4.8. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that backflow prevention retrofit work is performed when systems are down for major renovation.</p> <p>(NOTE: This requirement is waived if a threat dictates that the work be performed sooner.)</p> <p>(NOTE: This was originally checklist item number WQ.4.9. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that MAJCOM-certified technicians perform tests, inspections, and maintenance of backflow prevention devices.</p> <p>(NOTE: Current certificates using forms other than AF Form 483, <i>Certificate of Competency</i>, are valid until they expire.)</p> <p>Verify that technicians are recertified by the MAJCOM every 3 yr.</p> <p>(NOTE: This was originally checklist item number WQ.4.10. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the Backflow Prevention Manager has established a schedule for</p>

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established by the Back flow Prevention Manager (AFI 32-1066, para 13) [Moved April 1999].	<p>testing and inspecting all backflow devices, including air gaps.</p> <p>Verify that the frequency of testing, inspection, and overhaul of each device is established with due regard to the age, condition, and degree of hazard each prevents.</p> <p>(NOTE: The inspecting and testing schedule should be part of the recurring work program.)</p> <p>Verify that overhauls are performed according to manufacturer recommendations.</p> <p>(NOTE: The following are recommended time intervals for inspection of backflow prevention devices.</p> <table border="0"> <tr> <td>If the Degree of Hazard is:</td> <td>Inspect Device Every:</td> </tr> <tr> <td>Minor</td> <td>24 mo</td> </tr> <tr> <td>Moderate</td> <td>24 mo</td> </tr> <tr> <td>Severe</td> <td>6 mo</td> </tr> <tr> <td>(Air Gap)</td> <td>(12 mo)</td> </tr> </table> <p>(NOTE: This was originally checklist item number WQ.4.11. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that certified backflow inspectors inspect all cross-connections to make sure that:</p> <ul style="list-style-type: none"> - there is an approved air gap - the backflow prevention devices are in good condition - newly installed devices were installed correctly and are free of debris that could interfere with their functioning. <p>Verify that newly installed devices are inspected within 1 week of installation and a follow-up inspection is performed 3 mo later.</p> <p>Verify that all devices are tested in accordance with the UPC, the <i>UPC Illustrated Testing Manual</i>, or the manufacturer's instructions.</p> <p>Verify that defective devices are repaired and retested or replaced.</p> <p>Verify that the inspector records data on all cross-connections on AF Form 845, <i>Cross-Connection Information</i>, or an approved computerized version.</p> <p>(NOTE: For an air gap, the test consists of a visual inspection and an OK recorded if it is satisfactory.)</p>	If the Degree of Hazard is:	Inspect Device Every:	Minor	24 mo	Moderate	24 mo	Severe	6 mo	(Air Gap)	(12 mo)
If the Degree of Hazard is:	Inspect Device Every:										
Minor	24 mo										
Moderate	24 mo										
Severe	6 mo										
(Air Gap)	(12 mo)										
<p>WQ.1.14. Certain tasks are required to be conducted in the course of inspections of cross-connections (AFI 32-1066, para 13.1, 13.2, and 13.3) [Moved April 1999].</p>											

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<p>WQ.1.15. Installations are required to meet recordkeeping requirements with regard to backflow prevention (AFI 32-1066, para 13.4) [Moved April 1999].</p> <p>WQ.1.16. Drinking water at CDCs is required to be sampled monthly (HQ USAF/SG Policy Letter, 21 October 1992, para 1 and 4) [Moved April 1999].</p> <p>WQ.1.17. BES and CDC Directors are required to coordinate certain efforts (HQ USAF/SG Policy Letter, 21 October 1992, para 2) [Moved April 1999].</p> <p>WQ.1.18. The Director of the CDC is required to notify BES of certain activities (HQ USAF/SG Policy Letter, 21</p>	<p>Verify that the form appropriate for the device is also filled out:</p> <ul style="list-style-type: none"> - AF Form 843, <i>Backflow Prevention Inspection Data</i>. - AF Form 844, <i>Backflow Prevention (Vacuum Breakers) Inspection Data</i>. <p>(NOTE: This was originally checklist item number WQ.4.12. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the installation keeps an inventory of all device locations and an individual record (AF Form 845) for each device.</p> <p>Verify that records of cross-connection control and backflow prevention devices are kept at a central location.</p> <p>Verify that the Backflow Program Manager keeps the records current and complete.</p> <p>(NOTE: This was originally checklist item number WQ.4.13. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that the drinking water at CDCs is sampled monthly.</p> <p>Verify that bacteriological sampling is accomplished monthly.</p> <p>(NOTE: Chemical sampling is generally accomplished once every 3 yr.)</p> <p>(NOTE: This was originally checklist item number WQ.4.14. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that BES and the CDC Director coordinate the following:</p> <ul style="list-style-type: none"> - determine whether <i>Lead Contamination Control Act</i> (LCCA) sampling was thorough and complete - review records to ensure that identified corrective actions to remove sources of lead contamination were completed - ensure that Lead Assessment Program analytical results for drinking water lead concentrations are on file in the CDC administrative office. <p>(NOTE: This was originally checklist item number WQ.4.15. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that BES is notified prior to the opening of a new CDC facility and when</p>

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<p>October 1992, para 3) [Moved April 1999].</p> <p>WQ.1.19. Certain taps are required to be taken out of service and resampled (HQ USAF/SG Policy Letter, 21 October 1992, para 3) [Moved April 1999].</p> <p>WQ.1.20. BES is required to perform sampling in accordance with LCCA guidance under certain circumstances (HQ USAF/SG Policy Letter, 21 October 1992, para 3) [Moved April 1999].</p>	<p>plumbing lines or fixtures are added or replaced.</p> <p>(NOTE: This was originally checklist item number WQ.4.16. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that taps with lead concentrations exceeding 20 ppb are taken out of service and resampled.</p> <p>Verify that remediation is accomplished when successive sample results exceed 20 ppb.</p> <p>(NOTE: This was originally checklist item number WQ.4.17. It was moved to facilitate consistency between TEAM manuals.)</p> <p>Verify that BES performs sampling in accordance with LCCA guidance when metallic materials are used in CDC plumbing systems.</p>

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<p>WQ.2</p> <p>MISSING CHECKLIST ITEMS</p> <p>WQ.2.1. Installations are required to comply with all applicable Air Force requirements not contained in this check list (A finding under this checklist item will have the citation of the applied requirement as a basis of finding) [May 1997].</p>	<p>Determine if any new requirements have been issued since the finalization of the Air Force Supplement.</p> <p>Determine if the installation has activities or facilities which are Air Force regulated but no addressed in this checklist.</p> <p>Verify that the installation is in compliance with all applicable and newly issued requirements.</p>

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<p>WQ.4</p> <p>MISCELLANEOUS CHECKLIST ITEMS</p> <p>WQ.4.1. Checklist item moved [Moved April 1999].</p> <p>WQ.4.2. Checklist item moved [Moved April 1999].</p> <p>WQ.4.3. Checklist item moved [Moved April 1999].</p> <p>WQ.4.4. Checklist item moved [Moved April 1999].</p> <p>WQ.4.5. Checklist item moved [Moved April 1999].</p> <p>WQ.4.6. Checklist item moved [Moved April 1999].</p> <p>WQ.4.7. Checklist item moved [Moved April 1999].</p> <p>WQ.4.8. Checklist item moved [Moved April 1999].</p> <p>WQ.4.9. Checklist item moved [Moved April 1999].</p> <p>WQ.4.10. Checklist item moved [Moved April 1999].</p>	<p>(NOTE: This section is for checklist items which do not readily fit into TEAM Guide headings. In this case, checklist items on backflow prevention and requirements specific to CDCs are included.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.4. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.5. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.6. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.7. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.8. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.9. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.10. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.11. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.12. It was moved to facilitate consistency between TEAM manuals.)</p> <p>(NOTE: This was moved to checklist item number WQ.1.13. It was moved to facilitate consistency between TEAM manuals.)</p>

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WQ.4.11. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number WQ.1.14. It was moved to facilitate consistency between TEAM manuals.)
WQ.4.12. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number WQ.1.15. It was moved to facilitate consistency between TEAM manuals.)
WQ.4.13. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number WQ.1.16. It was moved to facilitate consistency between TEAM manuals.)
WQ.4.14. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number WQ.1.17. It was moved to facilitate consistency between TEAM manuals.)
WQ.4.15. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number WQ.1.18. It was moved to facilitate consistency between TEAM manuals.)
WQ.4.16. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number WQ.1.19. It was moved to facilitate consistency between TEAM manuals.)
WQ.4.17. Checklist item moved [Moved April 1999].	(NOTE: This was moved to checklist item number WQ.1.20. It was moved to facilitate consistency between TEAM manuals.)

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<p>WATER SUPPLY SYSTEMS</p> <p>WQ.10 General</p> <p>WQ.10.1. Operators of water supply systems are required to meet specific training requirements (AFI 32-1067, para 8.1).</p> <p>WQ.10.2. Supervisors are required to train all employees and enforce applicable safety standards (AFI 32-1067, para 9).</p>	<p>Verify that new operators receive classroom training and extensive supervised on-the-job training before being assigned to critical tasks.</p> <p>Verify that experienced personnel receive technical refresher courses and upgrade training.</p> <p>(NOTE: Training requirements may be met by one of the following means:</p> <ul style="list-style-type: none"> - AF training available through technical schools, career development correspondence courses, and on-the-job training - civilian training courses available at educational institutions, government agencies, and professional and technical associations - correspondence courses from accredited institutions for operators in areas that do not have local resident courses.) <p>Verify that all employees are familiar with the safety instructions in the following documents, as applicable:</p> <ul style="list-style-type: none"> - AFR 91-26, <i>Maintenance and Operation of Water Supply, Treatment, and Distribution Systems.</i> - AFOSH STD 127-10, <i>Civil Engineering.</i> - AFOSH STD 127-25, <i>Confined Spaces.</i> - AFOSH STD 161-21, <i>AF Hazard Communication Standard.</i> <p>Verify that the supervisor maintains current BES baseline and annual industrial hygiene survey reports.</p> <p>(NOTE: The supervisor should use these reports to train workers on occupational health hazards.)</p> <p>Verify that supervisors make safety instructions readily available to all operating personnel.</p> <p>Verify that supervisors train facility personnel on safety procedures and equipment and enforce their proper use at all times.</p> <p>(NOTE: Once trained, individual workers are personally responsible for following safe procedures.)</p>

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WQ.10.3. Each separate water supply source is required to have a water meter and a raw water sampling point (AFI 32- 1067, para 6).	Verify that each separate water supply source has a water meter and a raw water sampling point for water quality monitoring.
WQ.10.4. Each active well should have an air line or electric depth gauge to measure draw down, static level, and pumping level (MP).	Verify that each active well has an air line or electric depth gauge to measure draw down, static level, and pumping level. (NOTE: This MP is drawn from AFI 32-1067, para 6.)
WQ.10.5. Installations are required to use only lead-free pipe, solder, flux, and fittings when installing or repairing drinking water systems for drinking water (AFI 32-1067, para 12.4).	Verify that only flux and solder with less than 0.2 percent lead is used. Verify that pipes and pipe fittings contain less than 8 percent lead.

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<p>WATER SUPPLY SYSTEMS</p> <p>WQ.30 Documentation</p> <p>WQ.30.1. Installations are required to develop, publish, and periodically update procedures for operating their water systems during emergencies (AFI 32-1067, para 13).</p> <p>WQ.30.2. BCE is required to develop local operating instructions that address specific topics (AFI 32-1067, para 4.3).</p> <p>WQ.30.3. Water treatment logs are required to be prepared (AFI 32-1067, para 10.1.1).</p> <p>WQ.30.4. Water treatment facilities are required to manage logs and reports in accordance with specific requirements (AFI 32-1067, para 10.1).</p>	<p>Verify that an emergency contingency plan is in place and is periodically updated.</p> <p>Verify that BCE has developed local operating instructions that include the following:</p> <ul style="list-style-type: none"> - operational monitoring for process control - sampling and testing procedures - emergency operations - maintenance - regulatory compliance requirements. <p>Verify that operators prepare AF Form 1461, <i>Water Utility Operating Log (General)</i>.</p> <p>Verify that, if the water requires more than minor treatment, AF Form 1460, <i>Water Utility Operating Log (Supplemental)</i>, is prepared.</p> <p>Verify that daily operating logs and laboratory records are prepared for in-plant use.</p> <p>(NOTE: Computer files and printouts like the Work Information Management System (WIMS) operating logs are acceptable if they have the same information as the forms.)</p> <p>Verify that permanent records of the printouts are kept as if they were forms.</p> <p>Verify that backup copies of the active computer files are maintained to protect them against accidental loss.</p>

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<p>WQ.30.5. Specific records are required to be maintained for wells and pumping stations (AFI 32-1067, para 10.1.1.2 and 10.2).</p> <p>WQ.30.6. Specific physical facility information is required to be developed, maintained, and kept available at drinking water facilities (AFI 32-1067, para 10.2).</p> <p>WQ.30.7. Installations are required to develop and maintain effective maintenance plans that address specific topics (AFI 32-1067, para 10.3).</p> <p>WQ.30.8. Installations are required to notify the</p>	<p>Verify that operating logs or computer files are posted daily (covering 1 mo operation) in neat, legible form.</p> <p>Verify that the original form or computer printout is kept for the BCE permanent file.</p> <p>Verify that AF Form 996, <i>Well Data</i>, is completed and a file kept for each well, beginning with initial construction.</p> <p>Verify that the information is updated after completing a repair, redeveloping a well, or conducting a performance test.</p> <p>Verify that the following daily operating records are maintained for wells and pumping stations:</p> <ul style="list-style-type: none"> - AF Form 997, <i>Daily Well Activity Record</i> - AF Form 998, <i>Daily Pumping Station Activity Record - Water</i>. <p>Verify that the following information is developed, maintained, and kept available at the treatment facilities:</p> <ul style="list-style-type: none"> - required plant-specific O&M manuals and applicable AF publications - system operating instructions with single-line drawings, including operational and compliance monitoring procedures - up-to-date system as-built drawings along with other system plans and blue prints, including hydraulic water elevation profiles and a drawing of the entire collection and distribution systems - AF Form 996, <i>Well Data</i> - shop drawings, catalogue cuts, and any other equipment information or literature. <p>Verify that the installation develops and maintains effective maintenance plans that include:</p> <ul style="list-style-type: none"> - a recurring work schedule - a maintenance history for each major piece of equipment - an essential spare parts list, with spare parts stocked at the treatment facility or other accessible location - a long-range maintenance and improvement plan. <p>Verify that MAJCOM/CE is notified when the potable water supply becomes</p>

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MAJCOM/CE when the potable water supply becomes contaminated (AFI 32-1066, para 6).	contaminated.

